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1969

1969-1970 Wright State University Course Catalog

Wright State University

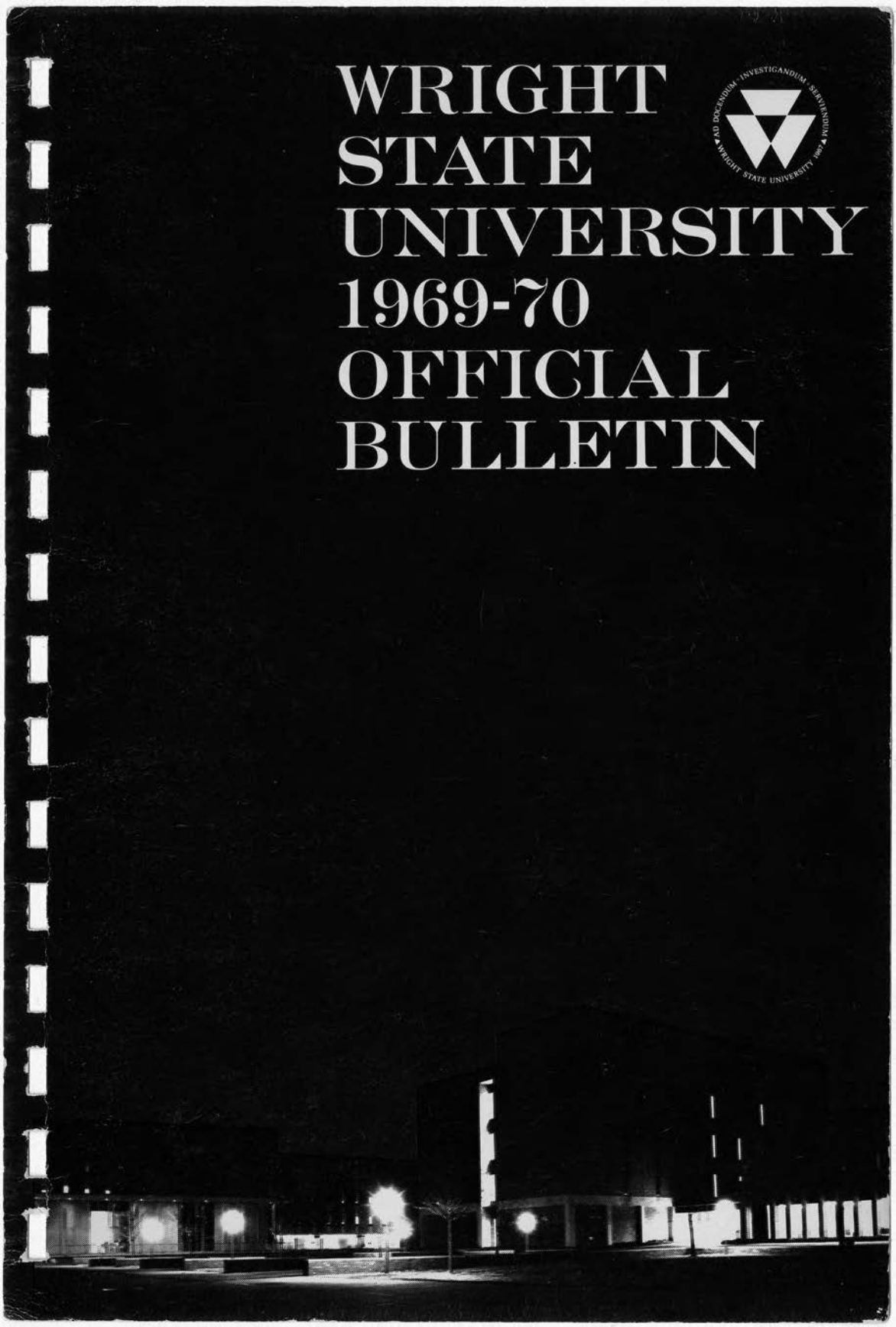
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WRIGHT
STATE
UNIVERSITY
1969-70
OFFICIAL
BULLETIN



Correspondence should be addressed to the offices indicated below and mailed to:

WRIGHT STATE UNIVERSITY
Dayton, Ohio 45431

General University Policy	The President
Academic Programs	The Dean of the appropriate Division
Academic Records and Reports	The Registrar
Admission	Director of Admissions
Financial Information	The Business Manager
Student Aid and Scholarships	Director of Student Aid
Publicity Information	Director of Communications
Student Activities	Director of Student Activities

Visitors are welcome at the University. The buildings are normally open Monday through Thursday from 8:30 A.M. to 11:00 P.M., on Friday from 8:30 A.M. to 5:00 P.M., on Saturday from 8:30 A.M. to Noon, and on Sunday afternoons from 1:00 P.M. to 4:00 P.M.

The University telephone number is Area Code 513 426-6650.

This *Bulletin* is up to date as of the time of printing. The University reserves the right to make changes in policy, regulations, and fees, as circumstances dictate, subsequent to publication. Each Division expects its students to have knowledge of the information presented in this *Bulletin* and in other University publications.

1969-70
WRIGHT STATE
UNIVERSITY
OFFICIAL BULLETIN
DAYTON, OHIO





BRAGE GOLDING

President

Wright State University

TABLE OF CONTENTS

The University	5
Academic Information	19
Financial Information	35
Campus Life	47
Liberal Arts	53
Business Administration	71
Education	85
Science and Engineering	101
Continuing Education	117
Graduate Studies	121
Courses of Instruction	131
Administration	217
Faculty	220
University Calendar	235
Index	238
Graduate Supplement	241



THE UNIVERSITY

HISTORICAL SKETCH

" . . . THE WRIGHT STATE UNIVERSITY This new state university should absorb the instructional programs, property, obligations, and staff of the Miami University branch and The Ohio State University branch on the Wright State Campus. The Wright State University should offer baccalaureate programs in the humanities and social sciences, science and engineering, teacher education, and business administration; and master's degree programs in these same fields. Other programs should be introduced as needs arise and as resources permit . . ."—Master Plan for State Policy in Higher Education, Ohio Board of Regents, June, 1966.

This charge from the Ohio Board of Regents did not go unheeded. In fact, the growth and development pattern of the University was so rapid as to border on the unbelievable.

Wright State University first opened its doors to 3,100 students as a campus operated jointly by The Ohio State University and Miami University in September of 1964. At that time, only one building stood on the 618 acre tract which was purchased from a combined University Building Fund raised by a citizens group headed by Mr. Stanley C. Allyn and Mr. Robert S. Oelman. There are now four large multi-purpose buildings representing over 12 million dollars of capital worth. In addition, the University Center was completed in the spring of 1969.

Until 1964, both parent institutions had been holding night classes in Dayton. The idea of a campus in Dayton was born at a luncheon in the late 1950's between Dr. John D. Millett, then President of Miami University and Dr. Novice G. Fawcett, President of The Ohio State University.

In the early part of 1966, Dr. Brage Golding, head of the Chemical Engineering School at Purdue University, was one of many noted educators who were interviewed by a Faculty-Student-Administration Screening Committee for the presidency of Wright State University. Dr. Golding was selected unanimously, accepted the invitation, and came to Wright State Campus as President-elect in October, 1966.

A truly historic moment occurred on October 24, 1968, in a wind and rainswept tent located in back of Millett Hall when Dr. Brage Golding was inaugurated as the first president of Wright State University. Under his guidance and leadership, the University community has seen the enrollment grow from 4,800 students in 1966 to approximately 8,000 students in 1968.

In June of 1967, enabling legislation was passed by the 106th General Assembly giving Wright State full university status. On October 1, 1967, pursuant to action by the Ohio Board of Regents and the Governor, university status was legally established.

Wright State is now offering undergraduate programs in over sixty areas of study. Graduate programs have also been developed.

In June of 1968, Wright State University—only three and three-quarters years after its inception—conducted its first commencement, granting 315 baccalaureate and 31 masters degrees.

In 1968, the University received full accreditation in all existing undergraduate programs by the North Central Association of Colleges and Universities and full accreditation for the masters program in both Education and Business Administration. Preliminary accreditation has been given to masters programs in Biology, Chemistry, and Mathematics.

THE CAMPUS

The original \$3 million investment by the Miami Valley community provided a 618-acre campus (428 acres purchased from private owners and 190 acres obtained from the United States Air Force), developed a master plan for the orderly growth of the campus, and built and equipped Allyn Hall.

This first building was named in honor of S. C. Allyn, whose vision and support have contributed immensely to the success of the new campus. Allyn Hall includes classrooms as well as many of the administrative, faculty, and student affairs facilities. When originally



constructed, the building was a self-contained university, and all the activities of the new school were centered in this one building. As new buildings arose, uses of Allyn Hall were continually altered to meet additional needs.

Oelman Hall, named after Robert S. Oelman, first chairman of the Wright State University Board of Trustees, was the second phase of the Wright State construction program. In addition to classrooms, teaching and research laboratories, and administrative and departmental offices, the building includes a 500-seat amphitheater designed for multi-purpose use, a 250-seat lecture hall, and a number of special scientific facilities.

The largest building on the new campus is Millet Hall, providing a library with adequate study and reading areas for 800 students and open stacks for some 190,000 volumes. The building also includes classrooms, lecture and seminar rooms as well as 150 faculty offices.

More complete facilities for studies in the sciences and engineering are included in the newest of the campus structures, Fawcett Hall. Within this building are 32 laboratories, 27 storage and preparation rooms, 42 classrooms, 63 faculty and divisional offices, a large lecture hall, and other educational areas including an observation platform designed for astronomy studies.

These four buildings are located on the western edge of the

campus and form "Founders' Quadrangle," the first of several planned academic courtyards.

The new University Center provides cafeteria, lounges, offices for student organizations and publications, and indoor recreational facilities as well as locker rooms for adjacent outdoor play areas. This building is so designed that it may be enlarged as demands for such facilities increase. Dormitories are under construction.

ACADEMIC ORGANIZATION

Wright State University offers instruction leading toward undergraduate degrees in the arts, science, education, business administration, and engineering through the Divisions of Liberal Arts, Education, Business Administration, and Science and Engineering.

Late afternoon, evening, and summer programs are organized through the Division of Continuing Education, which includes undergraduate courses in the regular academic fields as well as graduate courses in selected fields. These graduate programs function as a part of the Division of Graduate Studies.

THE DIVISION OF BUSINESS ADMINISTRATION. The Division of Business Administration has as its central objective the development of individual students to become qualified professional business administrators and staff technicians. At the same time, the faculty, through its various curricula, propose to develop in each student a broad liberal university experience so that graduates will not only be professionally qualified, but will find themselves a comfortable vantage in the arts and sciences. This program terminates with a Bachelor of Science degree offered with six major programs of study.

In order to provide more advanced professional study in business administration, the Master of Business Administration (MBA) degree is also offered. This graduate program serves two important groups: first, those with undergraduate degrees in business who want an in-depth program of advanced study; second, those whose undergraduate program has been in the liberal arts, sciences, or other professional areas, who desire professional administrative study. The MBA program equilibrates the two groups in terms of required background study by requiring all students pursuing the graduate degree to have had formal education in seven areas. Normally these areas are covered by the undergraduate program in business administration.

THE DIVISION OF EDUCATION. Teachers for the public schools are prepared through four-year curricula leading to the degree Bachelor of Science in Education and a four-year teaching certificate. All major teaching fields are available except physical education, home economics education, and industrial arts education. Students in these fields may take the common curriculum courses at Wright State University before transferring to another institution. Graduate courses leading to a master's degree are available for the preparation of various specialized personnel for public schools.

THE DIVISION OF LIBERAL ARTS. The Division of Liberal Arts has as its primary purpose provision for a well-balanced liberal education. It seeks through a flexible curriculum, with reasonable opportunities for election of courses, to develop a broad cultural background as a foundation for later professional study and work in a changing world. On graduation, the student should be qualified to pursue his special interest effectively, to appreciate the intellectual, aesthetic, and ethical values of life, and to act creditably in the society of which he becomes a part. Encouragement is given, especially in the junior and senior years, to definite preparation for a chosen career.



156
156
312

THE DIVISION OF SCIENCE AND ENGINEERING. The Division provides instruction for lower division and upper division students in the sciences and certain engineering fields and service courses for all areas. Baccalaureate programs are provided in biology, chemistry, geology, mathematics, medical technology, physics, psychology, systems engineering, engineering physics and computer science. Students interested in certain professional programs normally can take one of the science curricula or a modified program which will be acceptable for graduation or transfer elsewhere to the desired professional program.

Graduate programs leading to the Master of Science degree are offered in biology, chemistry and mathematics.

THE DIVISION OF CONTINUING EDUCATION. The Division coordinates the late afternoon and evening courses as a continuation of the daytime program of the University, and the summer program as a part of the year-round operation of the University's academic program.

In addition the Division is responsible for the developments of special credit and non-credit programs as well as the operation of academic programs conducted at locations other than the campus.

The Piqua Academic Center and the Western Ohio Branch Campus are operated by Wright State University, providing academic programs primarily of lower division courses with upper division and graduate courses to meet particular needs. These programs are conducted in the late afternoon and evening in the Piqua Central High School Building and the Branch Campus building in Celina.

THE DIVISION OF GRADUATE STUDIES. The Division of Graduate Studies is organized as one of the six major academic divisions of Wright State University. Presently, the Division offers master's degree programs in Business Administration, Biology, Chemistry, Education, Mathematics, Geology, Systems Engineering and History. Other master's programs will be announced when they are available.

In addition to the courses offered on the Wright State campus, graduate courses are made available to part-time students through the Piqua Academic Center and the Western Ohio Branch Campus in Celina. Some departments offer late afternoon, evening, and Saturday morning classes on the Wright State campus, and most departments offer extensive graduate programs in the summer quarter.

LIBRARY RESOURCES CENTER

The Library Resources Center is an instrument of education and as such plays an important part in the learning experience of the student. It has a significant role in the student's university education whether it is used for regular course work, independent study, or personal enjoyment. To utilize the facilities, members of the center staff are available to give service and instruction to students and faculty. The center consists of the following three facilities:

LIBRARY. The library facilities occupy the first two floors of Millett Hall. In an atmosphere conducive to study and research, seating for 800 persons is provided among the open book stacks. The rapidly growing collection of books, periodicals, and non-book material totals more than 155,000 items. In addition to the large number of books being added to the collection, 2,500 serials are received regularly. The library is also a depository for U.S. Government documents and publications of the State of Ohio.

In participating with the ten other libraries of the Dayton-Miami Valley Consortium, over 1,000,000 volumes are available within a radius of 30 miles. The library also participates in and maintains the *Union List of Serials in the Libraries in the Miami Valley*, a published list of journal and serial holdings of 41 libraries in the Miami Valley. Use of the facilities or resources outside of the Wright State community are arranged through the Interlibrary Loan Desk.

MEDIA SERVICES. The Audio-Visual Service, located on the ground floor of Millett Hall, provides service to faculty, student and staff in developing and utilizing media. All standard audiovisual equipment is available and accessible.

A large listening and viewing area is available for viewing films, filmstrips, film loops, microfilms, slides, and listening to record albums and audio tapes. The ever growing media collection is easily accessible and encourages its use by its availability. Also a substantial number of music scores are available in this area.

Graphic Services, located on the second floor of Allyn Hall, provides service to faculty, students and staff in developing and utilizing graphic material.

Graphic Services offers a complete black and white and color photography service, publication design and layout service, signs and

posters, general graphic artwork, and cinematography, both 8mm and 16mm.

INSTRUCTIONAL MATERIALS SERVICES. Instructional Materials Services provides an excellent source for ideas and media for students doing classroom demonstrations, school participations and student teaching. Media available includes courses of study, curriculum guides, resource units, teaching aids, standardization tests, pictures and charts, vertical file materials, publishers' and manufacturers' brochures, film catalogs, as well as other "source" catalogs. In addition, there is a school textbook collection of over five thousand volumes and an excellent children's literature collection.

An instructional media laboratory of mechanical, instructional, and audio-visual aids is available so students and faculty, with some assistance, may learn how to effectively use instructional equipment and media.

A collection of programmed material for higher education students is located in Instructional Materials Services. This collection of independent study material will assist students in developing background for future courses or a breadth and depth in areas of personal interest.

Handbooks are available for all the areas described above, giving more detailed information regarding the use and services of the library Resources Center.

THE UNIVERSITY AND THE COMMUNITY

Because of its location, Wright State University enjoys both the stimulation of a metropolitan community and the atmosphere of a college in the country. As a new university, it presents an opportunity to take advantage of all the current thinking and new knowledge with respect to organization, curriculum planning, and content of the teaching and research programs.

Wright State enjoys the dedication and support that can come only to a "hometown project." The civic, business, and industrial community of the Miami Valley area has been deeply involved in the University since its very beginning. Top community leaders laid the groundwork for the project, led the fund-raising campaign, and through acceptance of appointment to the Board of Trustees, continue their deep interest and enthusiastic support of the institution. This commitment on the

part of the community, coupled with state support, points to a future of great promise for Wright State University.

THE DAYTON-MIAMI VALLEY CONSORTIUM

Wright State University with ten other area institutions of higher education is a member of the Dayton-Miami Valley Consortium. The consortium was established to promote community service and inter-institutional cooperation in order to achieve the educational advancement, research development, and administration efficiency of the members.

In order to carry out these purposes, the consortium holds conferences of representatives of the teaching and research faculty and staff, library and administrative staffs of the member institutions, serves as a clearing-house for the exchange of information, and promotes projects of educational research and experimentation. Cooperative programs presently exist or are planned in teaching, research, publishing, educational evaluation, college finance and administration, and other areas.

PURPOSES OF THE UNIVERSITY

(Adopted by the Board of Trustees)

The chief purposes of Wright State University shall be the achievement of excellence in teaching, the achievement of substantial contributions to human knowledge, the achievement of major service to the larger community, and the maintenance of a free and cosmopolitan environment for the work toward such achievements.

TEACHING. The teaching program of the University shall reflect valid knowledge from the past, and also explore knowledge at its frontier, where validity is not yet firmly established.

The University shall pursue that ideal relationship between teacher and student, where each learns from the other; where the student is led outward to his highest level of motivation and understanding; and, where the teacher is bound by his own growing knowledge to a continuous revision of the content of instruction.

The student shall be exposed to a variety of academic disciplines and the exploration of areas of knowledge other than those lying within his professional studies. The University shall make opportunities available for the student to live and work with others and to know cultures other than his own.

The University shall make intensive efforts to assist each student,

with proper reference to his gifts or lack thereof, to achieve his maximum self-fulfillment, his greatest value as a member of society, and the highest quality of life of which he is capable. The University shall accept the obligation to assist and motivate each student in his field of career study to the end that he shall be able to compete with the graduates of any university in graduate study or in the earning of a livelihood in a changing and complex economy.

The University shall hold the years of study in residence to be only a beginning of the learning process, and shall seek to maintain in its professional community and its student body a consciousness of learning as a continuing process through life. To this end the University shall place no less emphasis upon excellence in adult education than upon excellence in the teaching program for degree candidates.

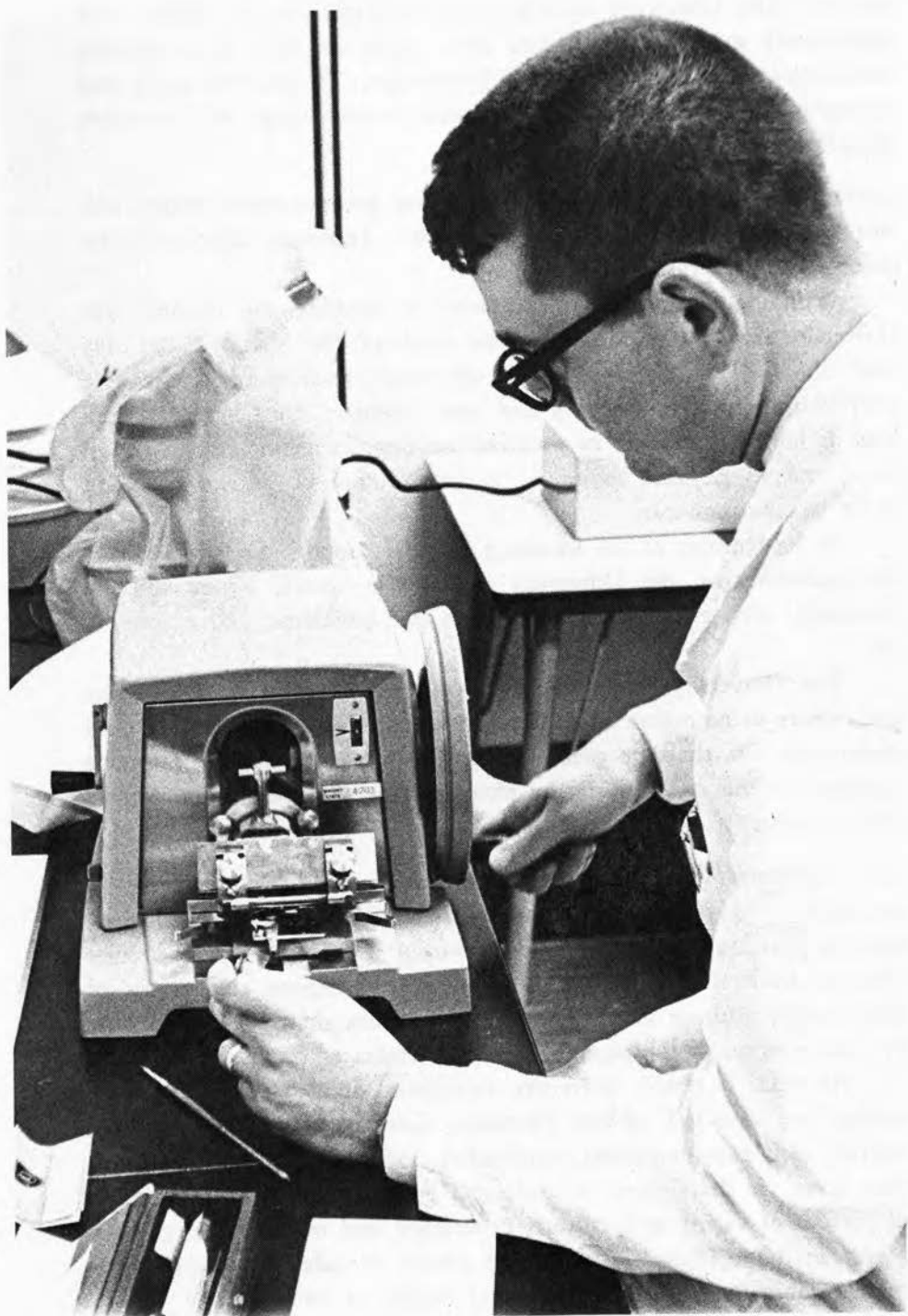
The University shall pursue the foremost knowledge of teaching methodology and be a place of study and experimentation in this field. The University will innovate to the end that more be learned at lower cost in wealth and human effort; but shall seek always to maintain the small-university environment, wherein the gifts of outstanding teachers can be known and cherished by the students in a context of personal relationships.

RESEARCH. The University shall actively foster the advancement of learning in each of its academic disciplines and among them. The University shall encourage the search for truth in all its fields, being no less concerned with new discovery in the arts and the humanities than in the sciences.

The University shall perform research at its various levels, and will on occasion perform research as a service to the larger community. No test of practicability shall be imposed upon scholarship, however, and the search for basic truth for its own sake shall not be subordinated to research for the near-range purposes of the larger community.

The University shall foster interdisciplinary research. While a degree of academic specialization shall be deemed necessary and proper, special effort will be made to encourage the scholar distinguished in more than one discipline and encourage joint achievement among the disciplines.

The University shall encourage and reward clarity of mind, creativity and objectivity of outlook, love of truth and discovery, and persistence to completion of undertakings. Openness of mind shall be



honored. The University shall provide incentives for its students and professional members to explore new paths, as well as established methodologies, in their pursuit of knowledge. To this end study and advancement of research methodology shall be encouraged in the various disciplines.

SERVICE. The University, as a public and predominantly urban university, shall be especially cognizant of the American university's tradition of public service.

Within a framework of excellence in teaching and research, the University shall be responsive to the needs of the Miami Valley, the State of Ohio, and the region. To the extent feasible and compatible with commitments in teaching and basic research, the University shall lend its human resources, its recorded learning, its techniques, its equipment, and its physical resources, to the solution of human problems in the larger community.

In recognition of its founding by and among the people of a metropolitan area, the University shall make special efforts to lend substantial service in the field of urban life, problems, and potentialities.

The University shall seek distinction as a center of knowledge and culture in its region of service. Intellectual activity and visual and performing arts shall be presented to the public, who shall be made welcome on this campus, and be recognized at all times as the owners of this University.

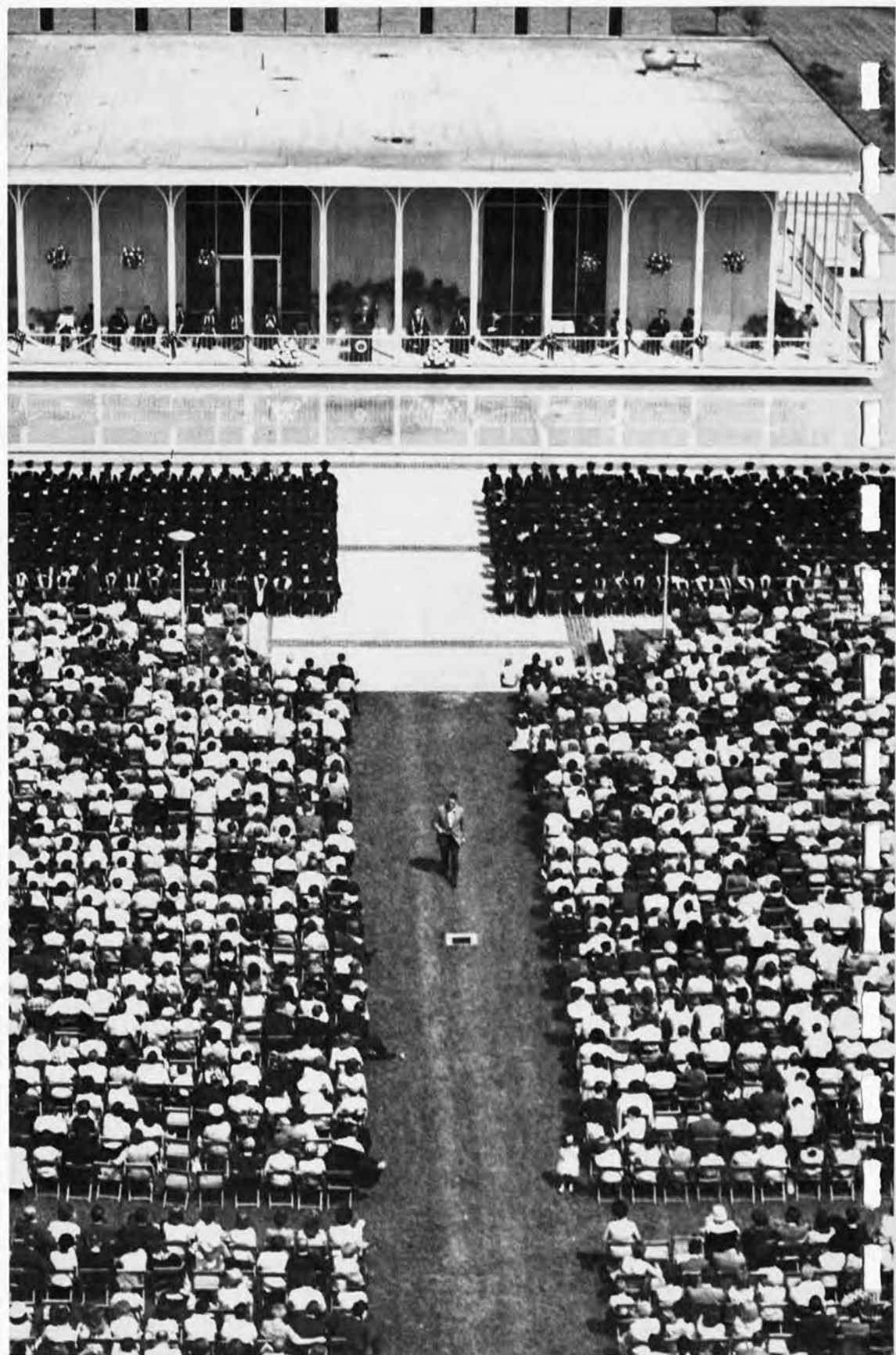
THE UNIVERSITY ENVIRONMENT. In the interest of achievement in the fields of teaching, research and service, the University shall support the freedom of each individual within the University to inquire into any subject, learn the truth about it, and express conclusions of such inquiry without interference. Such freedom shall be limited only by consideration of the equally important rights of others.

As befits a public university established in a metropolitan area during the latter half of the Twentieth Century, this University shall actively seek a cosmopolitan membership in its faculty, staff, and student body. It shall draw to itself and benefit from the participation of persons of varied race, culture, experience, and national background. Never shall the University cause any person to suffer disadvantage because of race, color, religion, national origin, or ancestry.



In keeping with its cosmopolitan character, the University shall aggressively maintain its identity as a general university and review its programs continuously, in order to guarantee that no discipline or field of specialization shall unduly dominate its total endeavor.

The University recognizes that its purpose and its desired environment, as hereinbefore described, are attainable only insofar as the people of the University aspire to them and actively seek them. To this end the University shall inculcate among all its members a sense of honor, professional pride, and mutual good faith.



ACADEMIC INFORMATION

ACADEMIC CALENDAR

The Academic Calendar of Wright State University divides the year into four quarters, each being eleven weeks in length. The Summer Quarter is divided into two terms, each of which is five and one-half weeks in length.

Admitted students—new, transfer, and continuing—may register for work in any quarter in which appropriate courses are offered.

(Complete listing of appropriate dates is included in the University Calendar at the end of this bulletin.)

ACCREDITATION AND MEMBERSHIPS

Wright State University is accredited by the North Central Association of Colleges and Secondary Schools. In addition, programs in the Division of Education have been accredited by the State of Ohio Department of Education. Wright State is also a member of the Assembly of the American Association of Collegiate Schools of Business (for studies in Business Administration), the American Association of Colleges for Teacher Education, the Midwest Conference on Graduate Study and Research, the National University Extension Association, and the Ohio College Association.

ADMISSION PROCEDURE FOR UNDERGRADUATE STUDIES

The student seeking admission should obtain the application forms and related materials, by letter or in person, from the Office of Admissions, Wright State University, Colonel Glenn Highway, Dayton, Ohio 45431.

For graduate admission procedures see page 123. For determining Ohio residency see page 40.

THE MATRICULANT

A student is a matriculant when he becomes a candidate for a degree or teacher certification from Wright State University. To become a candidate the student must present full credentials for admission and pay a matriculation fee of fifteen dollars by check or money order. He may register full-time or part-time.

All entering freshmen are required to take the achievement test (ACT) of the American College Testing Service, either before or during their first term on the campus. This is not used as an admission test, but as helpful information for the student and the university. Test centers for the ACT have been established throughout Ohio. Information regarding times for testing should be obtained from high school counselors.

THE OHIO STUDENT. To be admitted as a matriculant to Wright State, the Ohio student must have graduated from high school with sixteen units of study. A transcript of the high school record and an application for admission must be filed with the Office of Admissions, Wright State University, Colonel Glenn Highway, Dayton, Ohio 45431. A high school student should apply for admission during, but not before, the first semester of his senior year.

THE OUT-OF-STATE STUDENT. Matriculants from other states must meet the foregoing requirements for admission, and must present evidence indicating better than average ability to do college work.

THE TRANSFER STUDENT. The applicant who has been registered for one or more courses in another college is considered a transfer student. He must present a transcript from each college in which he has been registered, regardless of whether credit has been granted or whether he desires to receive credit upon admission. Processing of applications for transfer will not be completed until a transcript has been received from the institution or institutions previously attended.

A transfer student who is on probation or does not have a cumulative "C" average on all studies attempted will be considered for admission on probation. A student who has been suspended for academic reasons from other institutions will normally not be considered for enrollment until one calendar year has intervened. If a student feels that special circumstances warrant it, he may appeal for a reduction of the one-year intermission from his studies. The Committee on

Admissions will consider the admission of the suspended student, who if admitted will enter on probation.

Transfer credit will not be granted for course work with a grade of "D" or lower.

Courses taken ten years or more prior to admission will be subject to validation by the department responsible for the course. Transfer credits for matriculants will be evaluated by the end of the first quarter of a student's registration. Prior to receipt of this evaluation, it is the student's responsibility to see that he does not duplicate a course for which he may have transferable credit and to check that he has the necessary prerequisites for any course in which he registers.

Credits earned through correspondence study will be subject to the same regulations as other transfer credit.

THE CERTIFICATION CANDIDATE. A college graduate who wishes to become certified as a teacher must matriculate, filing full credentials for admission and evaluation, and paying the matriculation fee.

THE NON-DEGREE STUDENT

A student who wishes to take courses but does not plan to be a degree or certification candidate is a non-matriculant. To be admitted the non-matriculant student must file with the Director of Admissions a letter or transcript of record indicating good standing in the last school attended. He may only register as a part-time student, taking less than twelve hours of course credit in any quarter. Credits for such courses will be officially recorded and may be transferred. No more than thirty quarter hours of credit earned as a non-matriculant may be applied toward total degree requirements. No matriculation fee is charged. If he has earned a 2.0 or higher average the non-matriculant may apply for admission as a degree candidate, filing full credentials and paying the matriculation fee. Transcripts will not be officially evaluated for non-matriculants.

Other types of non-degree students follow different admission procedures.

THE UNCLASSIFIED STUDENT. A college graduate is permitted to take undergraduate courses as an unclassified student upon presentation of evidence of graduation. (See also Graduate Admission, page 123.)

THE TRANSIENT STUDENT. A student wishing to take courses for transfer to another college may do so at Wright State if he presents at registration each quarter an official transient student permit from the college accepting the course credit. This permit must include the number of credit hours the student has successfully completed.

THE SUPERIOR HIGH SCHOOL STUDENT. A superior high school student may enroll in some courses given at Wright State. To be admitted to these courses the high school student must be in the upper one-fourth of his class scholastically, be recommended by his principal, have the written consent of his parent or guardian, and place high on aptitude tests. Further information about this program may be obtained from the high school principal or guidance counselor.

READMISSION TO THE UNIVERSITY

A Wright State student suspended for scholarship may be readmitted after at least one quarter has elapsed, upon petition to and approval of the Committee on Admissions. The committee will decide whether the student should return on the basis of his academic ability, his circumstances, and his motivation. The student should present evidence of a change in circumstances or conditions which will support his application for readmission. If the committee approves the student's readmission, he will return on probation and under whatever special circumstances the committee may deem advisable.

A second suspension constitutes dismissal. A student who has been dismissed may under unusual circumstances apply for readmission. In such a case, he may present a petition to the Committee on Admissions which will not allow re-enrollment for one calendar year from the date of dismissal.

Transcripts from all other colleges or universities of courses taken while under suspension or dismissal from Wright State will be considered for readmission and evaluated for transfer of credits.

REGISTRATION

The credit hour is based upon 50 minutes of instruction each week for a period of one quarter, (i.e., a two credit hour course will normally require 100 minutes in class per week and a three credit hour course will require 150 minutes). Laboratory courses will generally require a somewhat greater expenditure of time for each credit hour earned. The student should expect to spend at least two hours in outside preparation

for every credit hour of the class. In other words, for every class hour two additional hours are expected to be spent outside of class in reading, writing, thinking, solving problems, or whatever may be required. For this reason, a student who holds outside employment should be careful in planning his academic program and should discuss his work load with his adviser before registration.

Twelve credit hours is considered to be a minimum fulltime load during the Fall, Winter, or Spring quarter and requires adviser approval. The full-time load is usually between 14 and 17 credit hours per quarter.

A full-time load during any one term of the Summer quarter would be 6 credit hours and would require adviser approval. A normal full-time load is between 6 and 9 credit hours per term.

It is recommended that those students employed full-time register for no more than 6 quarter hours credit or two courses during the Fall, Winter, or Spring quarter and one course or 3 credit hours during any one term of the Summer quarter.

REGISTRATION PROCEDURE. Prior to registration, each full-time student is advised by a member of the faculty. Each new student will have a temporary adviser. However, after the initial registration, the freshman and sophomore student will come under the guidance of an adviser assigned according to the curriculum the student is pursuing. The adviser will ordinarily be a member of the department in which the student expects to major.

Each junior and senior will come under the guidance of the faculty and staff of the department in which the student majors or is pursuing his major.

Even though each student (part-time or full-time), regardless of class rank, is encouraged to seek guidance from his adviser as well as other faculty and staff members, *the ultimate responsibility for selection of courses based upon the requirements of the university, division, and department, as prescribed in the official University Bulletin, remains with the student.*

The dates of registration are announced in the calendar printed at the end of this Bulletin.

Tuition for a pre-registered student must be paid by the date specified in the University Calendar. Unpaid registration will be can-



celled to free class spaces for students registering after that date. Each student whose pre-registration has been cancelled may re-register.

An evening student will be registered and advised on the dates announced each quarter in a separate schedule of evening courses.

Registration will not be accepted after the first week of the term, unless the instructor, department chairman, and dean of the division approve the late registration during the second week. No registration will be accepted after the second week of the term.

CROSS REGISTRATION WITH DAYTON-MIAMI VALLEY CONSORTIUM

Regularly enrolled full-time students of Dayton-Miami Valley Consortium institutions, under the conditions set forth below, may register for credit in courses offered by other Consortium institutions at no additional charge, on a space-available basis. This policy applies *only* to the regular sessions of the regular academic year, and specifically excludes summer sessions and other self-supporting or self-sustaining programs.

If a student of one Consortium institution desires to take a course in another Consortium institution, the following conditions must be met:

1. The student is regularly enrolled as a *full-time student* of a Consortium institution.
2. He has obtained his adviser's consent for the desired course.

3. The course is not currently available at his home institution.
4. He satisfies all course prerequisites and is acceptable to the host institution.
5. Space in the desired course is available.

RESERVE OFFICERS TRAINING CORPS

Although an ROTC program has not been established at Wright State University, arrangements have been made for those students interested in Army ROTC to enroll in the program under provisions of the Dayton Miami Valley Consortium. Students may enter the four-year program as freshmen or the two-year program as juniors.

CHANGES OF PROGRAM AND WITHDRAWALS

Forms for reporting courses to be added, dropped, or changes to be made, may be obtained from the Office of the Registrar. No change in registration is made until the change of program form has been accepted by the Office of the Registrar and the fee for dropping courses has been paid. There is no fee for adding courses, although tuition is charged when applicable. No student may be admitted to or will receive credit for a course in which he is not properly registered.

Registration, including course additions, must be completed by the end of the first week of the term. However, department chairmen and deans of the division may approve registrations, including course additions, until the end of the second week of the term.

A student may initiate action to drop a course or withdraw from the University without grade up to the date specified in the University Calendar (about midway in the term). No record of these courses will appear on the student's transcript.

A drop or withdrawal without record after the date specified in the University Calendar may be permitted when the circumstances are beyond the control of the student. Permission may be granted only by petition to a Divisional Petitions Committee with the concurrence of the University Petitions Committee.

A student withdrawing from Wright State University must file a withdrawal form in the Office of the Registrar at the time of his withdrawal but no later than the date specified in the University Calendar.

A student who stops attending a course and does not make an official withdrawal will receive a grade of "F".

The student should note that the withdrawal dates pertaining to refund of tuition presented in the Financial Information section of the Bulletin may differ slightly from withdrawal dates as they pertain to grades.

CLASS RANK DEFINITIONS

Freshman	0-35 hours earned, including accepted transfer credit.
Sophomore	36-80
Junior	81-125
Senior	126+
Unclassified	holds baccalaureate degree from an accredited institution.
Graduate	formally admitted to Graduate School.

Hours Earned refers to hours passed and transfer credit. Hours Attempted refers only to hours attempted at Wright State University, including those in which the grade has been an "F."

GRADE EXPLANATION

Academic achievement is indicated by the following letter grades and points used in calculating grade-point-averages:

<i>Grade</i>	<i>Points</i>	<i>Meaning</i>
A	4	Highest Quality
B	3	Second Quality
C	2	Third Quality
D	1	Lowest Quality
F	0	Failed
I	0	Incomplete

The grade of incomplete is given only when part of the work required is missing and the instructor has reason to believe that the work will be completed. An "I" received in one quarter must be removed at a time established by the instructor, but no later than the end of the next quarter (excluding the summer quarter). If not removed, the "I" automatically becomes an "F".

The following symbols appear on the record, but are not included in calculating grade-point-averages:

<i>Symbols</i>	<i>Meaning</i>
L	Audit; given only if arranged for at the time of registration.

N	No report; instructor did not report grade.
P	Passing; given only for separately approved courses.
S	Satisfactory performance.
U	Unsatisfactory performance.

Grade reports are mailed as soon after the end of the quarter as possible.

COURSE REPEAT

A student may repeat once any course which he has taken previously and for which he has received the grade of "F" or "D". A student with the permission of his adviser and the approval of his Divisional Petitions Committee and concurrence of the University Undergraduate Petitions Committee may repeat once some courses in his major field which he has taken previously and for which he has received the grade of "C". Only hours and grade points earned the last time the course is taken will be included in the computing of grade point averages and meeting degree requirements. Whenever a course is being repeated under the above terms, it must be so specified by the student at the time of registration on his course registration form.

The cumulative grade-point-average at the end of the quarter will reflect the drop of previous hours and grade points of the repeated course. However, all grades and grade point averages and academic actions for earlier terms will remain unchanged on the record.

In the calculation of cumulative grade point averages for honors, each grade recorded for the student will be considered.





DEGREE REQUIREMENTS

1969-70 GENERAL EDUCATION REQUIREMENTS

IMPORTANT NOTICE: By action of the Academic Council of Wright State University just prior to the printing deadline for this bulletin, the "Common Curriculum" was abolished and replaced with "General Education Requirements." Because of the printing deadline, it was too late to change the curricula guides located throughout the Bulletin. Consequently, each student is cautioned to check carefully the new "General Education Requirements" against any curricula guides which he may elect to use.

Every student, regardless of his special interest, must select at least the indicated number of courses in each of the following areas.

AREA ONE—2, 3 courses

Freshman English. The Freshman English program consists of English 11-12-13. On the basis of proficiency examination administered by the English Department, a student may omit English 11 and meet the area requirement through satisfactory performance in English 12-13.

AREA TWO—3 courses

Biology, Chemistry, Geology, Physics (courses numbered below 100 must include laboratory work).

AREA THREE—9 courses, with at least three in each of groups one and two.

Group One: Economics, Geography, Political Science, History, Psychology, Sociology and Anthropology.

Group Two: Classics, English, Fine Arts, Philosophy, Religion, Theatre, Modern Languages (literature or literature in translation).

Because of course design, certain courses must be taken as a sequence in order to be applied toward meeting an area requirement.

GRADUATION REQUIREMENTS. To qualify for a baccalaureate degree from Wright State University, students must meet the following University requirements.

1. Complete the requirements of the Common Curriculum.
2. Fulfill the on campus credit requirements of the University.
3. Earn a cumulative average of 2.0 or better.
4. Earn at least 186 quarter hours of credit applicable toward the degree.

A student must meet the University, divisional and departmental requirements for graduation as specified in the University regulations which are current when he enters the University or may choose to elect any subsequent set of requirements which becomes effective while he pursues his studies.

Fulfillment of these requirements is subject to the validation of the major department and division prior to graduation.

Divisional and departmental requirements are indicated in the appropriate sections of this bulletin.

ON-CAMPUS CREDIT REGULATIONS. To receive a baccalaureate degree from Wright State University a student must satisfy the following residence requirements:

1. A minimum of forty-five quarter hours of course work must be taken from Wright State.*
2. At least fifteen of the last forty-five hours of credit needed for the degree must be taken from Wright State.*
3. A minimum of thirty hours of credit in courses numbered 300 or above must be taken from Wright State.*

A person having a baccalaureate degree from an accredited institution and wishing to earn a second baccalaureate degree from Wright State University must satisfy the requirements of the department and division through which he expects to receive the second degree. He must take at least thirty hours of course work at Wright State*, at least fifteen of which must be in courses numbered 300 or higher.

REQUIREMENT FOR BACCALAUREATE DEGREE FROM MIAMI UNIVERSITY. Any undergraduate student at Wright State enrolled prior to the date of independence and formation of the Wright State University may meet the credit-hour requirements for a degree from Miami University with credits earned on the Wright State campus, providing (1) the student fulfills the degree requirements of Miami University which are not specifically waived for the Wright State campus, and (2) the degree requirements are completed not later than August 31, 1970.

* Includes studies on campus as well as branches and academic centers.

Prior to the fall trimester of 1967, work taken on the Wright State campus was recorded at both Miami University and Wright State. Beginning with the fall trimester 1967, no grade reports will be exchanged. To enable students desiring their degree from Miami to have their work recorded there, courtesy transcripts will be issued at the time of transfer, graduation application, or at the request of the Registrar at Miami University.

All undergraduate students who transfer between the two universities and begin their work at Wright State University after January 1, 1968, will be considered the same as transfer students by Miami University and Wright State University. Courses taken at Miami University after January 1, 1968, will be considered for transfer credit by Wright State, even though the student was enrolled at Wright State prior to the date unless conditions in paragraph one above from the Wright State catalog should apply.

Courses taken at Wright State after January 1, 1968, for those students desiring the Miami degree will be considered as Miami main campus credit—including grades and points—up to August 31, 1970.



SCHOLASTIC REGULATIONS

a. Scholastic actions (*i.e., placed on probation, removed from probation, suspension for scholarship, and dismissal for scholarship*) are taken by the Registrar on the basis of quarter averages as computed in the Office of the Registrar.

b. A student carrying nine or more credit hours in any quarter is subject to the same scholastic regulations as if he were carrying a full load.

c. A student carrying less than nine credit hours is subject to scholastic action at the close of the quarter in which the total credit hours completed or attempted reaches or exceeds twelve and at the completion of each quarter thereafter in which a similar twelve credit hour increment is reached.

d. A student whose grade point average is below 2.0 but above 1.0 any quarter shall be placed on probation for one quarter.

e. At the close of a quarter of probation, one of the following actions shall be taken:

1. If a student's grade point average for the quarter is 2.0 or higher and his cumulative average is 2.0 or higher, he shall be *removed from probation*.
2. If a student's grade point average for the quarter is 2.0 or higher but his cumulative average is below 2.0, he shall be *continued on probation*.
3. If a student's grade point average for the quarter is less than 2.0 but above 1.0 and his cumulative average is still above 2.0, he shall be *continued on probation*.
4. If a student's grade point average for the quarter is below 2.0 and his cumulative average is below 2.0, he will be *suspended for scholarship* for a period of one quarter. After that period, the student may be readmitted through application for readmission to the Admissions Committee. Readmission is not automatic.

f. Any student, other than a first quarter freshman, whose grade average for a quarter is lower than 1.0, shall be *suspended for scholarship* for one quarter. However, a first quarter freshman whose grade point average is below a 1.0 shall be *placed on probation* along with those whose grade point average is between 1.0 and 2.0.

g. Credit hours for transfer, proficiency, and grades of "S" and "P" are disregarded in the computation of the quarter and cumulative averages. They are not considered in determining scholastic actions, but are credited toward graduation.

h. A student readmitted after being *suspended for scholarship, re-enters on probation.*

i. A second *suspension for scholarship* while on probation constitutes *dismissal for scholarship* from the University for a period of one calendar year.

j. After that period, the student may be readmitted through application for readmission to the Admissions Committee. Readmission is not automatic.

PETITION

A student may petition for an exception to any of the academic regulations. The petition is acted upon by the Divisional Petitions Committee. All decisions on petitions are subject to review by the University Undergraduate Petitions Committee which may either affirm or reverse them. Petition forms may be obtained and submitted through the Office of the Registrar.

COURSE AUDIT

A student may audit a course if space permits and he has the written approval of the instructor prior to enrollment.

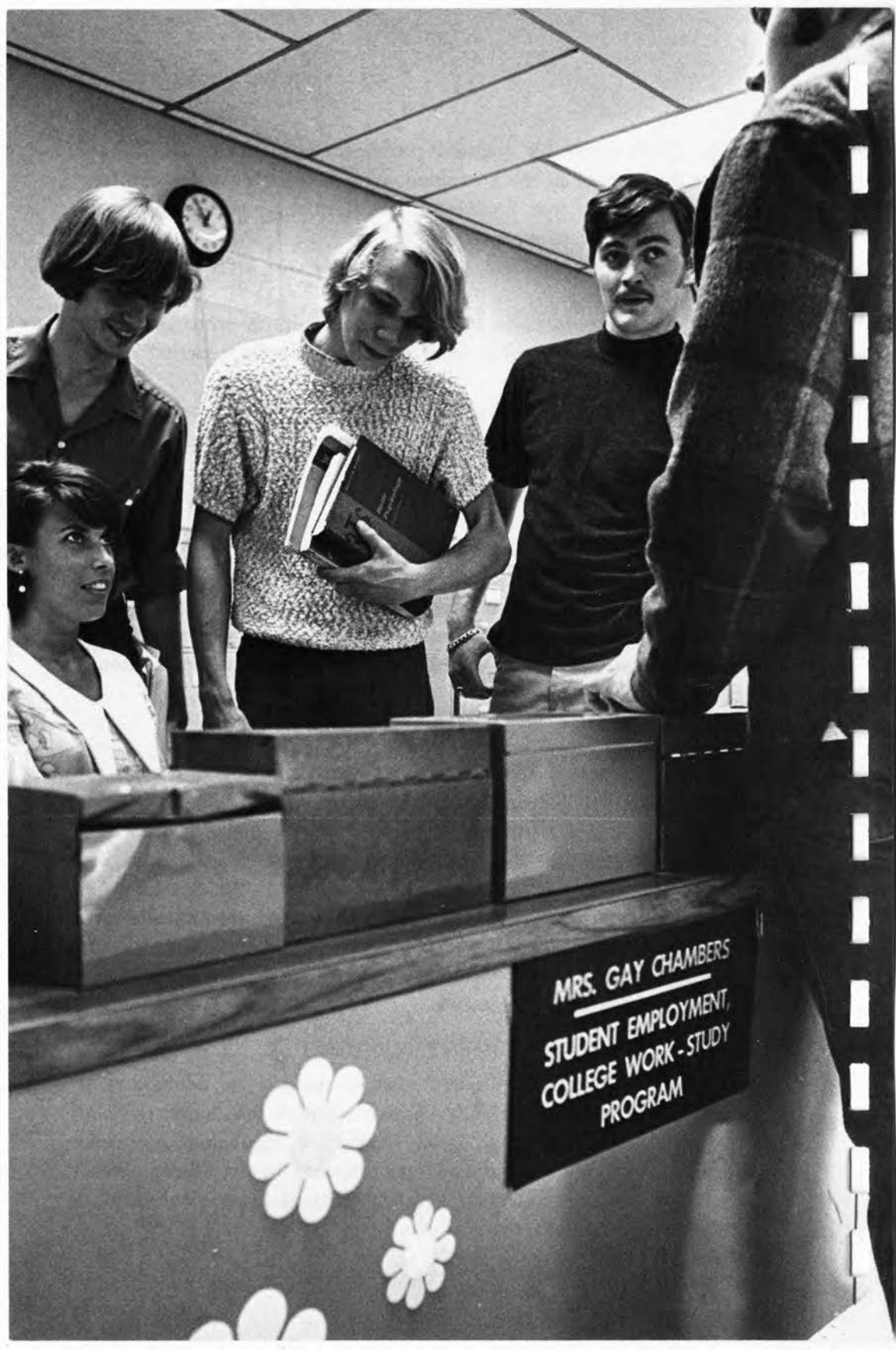
The degree of participation required of an auditing student is left to the discretion of the professor but must not exceed the requirements placed on regular students.

Audited courses will not be counted toward the establishment of full-time status.

Registration for audit cannot be changed to registration for credit after the first meeting of the course.

STUDENT CONDUCT

Wright State University believes that its students are adults and attempts to treat them accordingly. Consistent with this belief, the University has established a minimum number of regulations governing student conduct. These regulations are described in the Student Handbook. It is the responsibility of each student to become informed of these regulations.



MRS. GAY CHAMBERS
STUDENT EMPLOYMENT,
COLLEGE WORK-STUDY
PROGRAM

FINANCIAL INFORMATION

NOTE: The fees indicated in the following section were in effect for the 1968-69 school year. At the time of printing this bulletin, the legislature was still in session and the level of state subsidy had not been established for the 1969-70 school year. Dependent upon this level, instructional fees may be increased. The General Services Fee will increase by a nominal amount.

The following is the schedule of fees and expenses applicable to attendance at Wright State University during 1968-69 academic year. All such fees and charges are subject to change.

INSTRUCTION AND GENERAL AND STUDENT SERVICES

PER QUARTER—MAIN CAMPUS	Instructional Fee	General Services Fee	Total
Twelve or more credit hours (full-time)	\$153.00	\$10.00	\$163.00
Less than twelve credit hours (part-time)			\$ 14.00/qtr. hr.
Tuition for non-residents (full-time) (To be added to the above \$163.00)			\$200.00
Tuition for non-residents (part-time) (To be added to the above \$14.00/qtr. hr.)			\$ 17.00/qtr. hr.

PER HALF-QUARTER—MAIN CAMPUS

Six or more credit hours (full-time)	\$ 76.50	\$ 5.00	\$ 81.50
Less than six credit hours (part-time)			\$ 14.00/qtr. hr.
Tuition for non-residents (full-time) (To be added to the above \$81.50)			\$100.00
Tuition for non-residents (part-time) (To be added to the above \$14.00/qtr. hr.)			\$ 17.00/qtr. hr.

NOTE: see page 40 for residency requirements.

PER QUARTER—ACADEMIC CENTER (PIQUA) ONLY

Twelve or more credit hours (full-time)	\$153.00	\$ 2.00	\$155.00
Less than twelve credit hours (part-time)			\$ 13.00/qtr. hr.
Tuition for non-residents (full-time) (To be added to the above \$155.00)			\$200.00
Tuition for non-residents (part-time) (To be added to the above \$13.00/qtr. hr.)			\$ 17.00

PER HALF-QUARTER—ACADEMIC CENTER (PIQUA) ONLY

Six or more credit hours (full-time)	\$ 76.50	\$ 1.00	\$ 77.50
Less than six credit hours (part-time)			\$ 13.00/qtr. hr.
Tuition for non-residents (full-time) (To be added to the above \$77.50)			\$100.00
Tuition for non-residents (part-time) (To be added to the above \$13.00/qtr. hr.)			\$ 17.00/qtr. hr.

ADDITIONAL CHARGE FOR APPLIED MUSIC

One and one-half credit hours (one half-hour lesson per week)	\$20.00
Three credit hours (two half-hour lessons per week)	\$40.00

OTHER FEES

COURSE AUDIT—Fees are the same as for regular registration.

LATE REGISTRATION—Per Calendar Week \$ 5.00

CHANGE OF COURSE (No charge for additions)—Per Change \$ 5.00

ADMISSION FEE (Non-refundable) \$15.00

GRADUATION \$10.00

TRANSCRIPT—One free—Each thereafter \$ 1.00

Fees in addition to Instruction and General are charges for individual instruction courses. (Example: Applied Music Instruction, Voice or Instrumental).

PROFICIENCY TEST \$5.00/qtr. hr.

RETURNED CHECK PENALTY—Per Check \$10.00

A payment made with a bad check shall result in cancellation of the student's registration until the fee and penalty are properly paid.

LIBRARY

Fines for late return of books and charges for lost books to be set by the Librarian with the approval of the Business Manager.

GRADUATE ADMISSION FEE

Effective July 1, 1969, all graduates of Wright State University who are applying for admission to the Graduate Division shall be charged an application fee of \$5.00. All other students applying for admission to the Graduate Division shall be charged an application fee of \$10.00. These fees are not refundable.

GENERAL FINANCIAL POLICIES

To provide additional receipt, it is to the student's advantage to pay by check or money order, made payable to Wright State University. Forward to the attention of the Bursar Office, Room 177, Allyn Hall. The check or money order should be written in the exact amount of the fee being paid.



All fees and charges for pre-registered students shall be paid by the dates specified in the University Calendar. After these dates unpaid registrations will be cancelled to make class space available for students registering later. After the dates specified in the University Calendar, all fees and charges are due and payable at the time of registration. No registration or payment will be accepted after the first week of classes.

Wright State University's policy does not permit deferment of the payment of fees or acceptance of partial payments.

INSTRUCTIONAL FEE CERTIFICATES:

A. A certificate may be used only by the person whose name is thereon recorded unless the certificate is endorsed to another recipient or is to be used as a scholarship.

B. Instructional Fee Certificates cover the cost of the *instructional fee only*, and do not cover the cost of general fees, special course assessments, or service fees.

Fee assessments are subject to audit at any time throughout an enrollment period or the academic career of the student. Students who do not make acceptable arrangements to pay the appropriate sum within thirty days after they have been notified that the fees are due will have their current registration cancelled.

Wright State students taking courses at the Dayton Art Institute must register at both schools. Fees for these courses are to be paid to the Dayton Art Institute. Credit hours taken at the Dayton Art Institute are not included in the fee computation at Wright State.

REFUND OF FEES

The schedule of refunds may be found in the University Calendar at the end of this bulletin. A refund will not be allowed unless the withdrawal is regularly made through the Registrar's Office with the approval of the adviser, and will be computed from the day such withdrawal is reported to the Office of the Registrar.

NON-RESIDENT STUDENTS

TUITION CHARGE FOR NON-RESIDENTS OF OHIO. Students attending Wright State University who reside in a state other than Ohio are required to pay a tuition fee as described.

The burden of registering as a non-resident of Ohio is placed upon the student. Any false statement of residence by a student for the purpose of avoiding the proper payment of the tuition fee may result in disciplinary action. Any claim by a student to a change in the facts of residence, or any doubtful set of facts, should be set forth in writing to the Business Manager of Wright State University for his determination.

The following general rules, established by the Board of Regents for all state universities, govern the payment of the tuition fee.

RULES GOVERNING OHIO RESIDENCY. A student is an "Ohio resident" if he meets the following requirements:

1. An adult student, 21 years of age or older, is considered to be an Ohio resident if he has resided in the state for a minimum of twelve consecutive months preceding the date of enrollment, or if he is gainfully employed in the State of Ohio and is pursuing a part-time program of instruction and there is reason to believe that he did not enter the state from another state for the sole purpose of enrolling in an Ohio public institution of higher education. Teachers in Ohio schools and colleges shall be considered residents of the state as of the effective date of their contract of professional service.

2. A minor student under 21 years of age is considered to be an Ohio resident if his parents or his legal guardian have resided in Ohio for a minimum of twelve consecutive months preceding enrollment, or if the parents or legal guardian have established residence in Ohio, and if at least one parent or guardian is employed in Ohio.

3. An emancipated minor under 21 years of age may be considered as an adult student in determining residency, provided such minor presents satisfactory evidence that his parents, if living, do not contribute to his support and do not claim him as a dependent for federal government income tax purposes.

4. The residency of a married woman is determined by the rule which would apply to her husband if he were to seek enrollment; except that a woman who would have been classified as an Ohio resident immediately prior to her marriage may continue to be classified as an Ohio resident if she continues to live in the state.

5. A student classified as a non-resident of Ohio shall not be classified as a resident during his continued period of enrollment unless he satisfied the conditions of items 1 or 2 above.

6. A minor student classified as a resident of Ohio shall be considered to have lost his status 12 months after his parents or legal guardian move their residence to another state or accept employment in another state.

7. Persons in military service who entered such service as residents of Ohio and their dependents shall be considered residents if they provide proof of continued Ohio domicile or of continuous voting in Ohio.

8. Persons in military service and their dependents shall be considered to be Ohio residents during the period when the actual duty assignment is in Ohio and they actually reside in Ohio.

9. Aliens holding immigrant visas may establish Ohio residency in the same manner as citizens of the United States. Alien students admitted to the United States on student visas shall be classified as non-resident students.

FINANCIAL AID

GENERAL STATEMENT

Wright State University provides opportunities for financial assistance to the ambitious and promising student who needs help in meeting the costs of college attendance.

The University feels that the primary responsibility for financing a college education rests with the student and the student's family. However, many circumstances can limit the amount of assistance available to the student. Individual eligibility for assistance is established on the basis of proven financial need, academic potential and achievement, and other specific criteria set forth by the type of assistance available.

To assist students who have an established financial need, the University offers assistance in the form of scholarships, grants-in-aid, loans and employment. Students desiring to apply for these types of assistance must contact the Student Aid Office for the appropriate forms.

APPLICATION PROCEDURES

All Students

An application for financial assistance may be obtained by contacting the Student Aid Office at Wright State University. This application must be completed and returned to the Student Aid Office.

Awards cannot be finalized until the student has completed the admission process. Entering freshman and transfer students should be sure that a transcript of credits has been sent to the Admissions Office to complete their admissions application.

Dependent Students

In addition to filing an application for financial aid, students who are receiving financial assistance from their families must have their parents fill out a Parent's Confidential Statement and send it to the College Scholarship Service. These forms may be obtained from a high school counselor or the Student Aid Office. Allow approximately four weeks for the College Scholarship Service to process the Parent's Confidential Statement.

Married or Independent Students

Married students or students who are not receiving financial assistance from their parents are required to contact the Student Aid Office so that independent status can be established. Once independent status is determined, the student is required to complete an application and a Student's Financial Statement. The Student's Financial Statement can be obtained from the Student Aid Office and should be sent to the College Scholarship Service for processing.

GENERAL INFORMATION

1. The Student Aid Office attempts to provide as much assistance in relation to the student's need as funds will allow. Because scholarship and grant funds are limited, a student's need cannot always be met with these types of gift aid. Therefore, several types of financial aid may be combined. It is not uncommon for a student, particularly with a great need, to receive assistance in the form of scholarships, grants, loans and employment earnings, or some combination of these types.

In offering a student a particular financial aid package, the Student Aid Office attempts to arrange a combination of aid in a manner that will be most beneficial to the student.

2. Funds are allocated on a three quarter basis. As long as the student remains in need of the financial aid and remains in good academic standing, the award will remain in effect for the three quarter academic year.

3. A new application for assistance and a new financial statement must be filed each academic year.
4. Notification must be made to the Student Aid Office of any additional financial assistance received after filing an application. Any change in the student's or the family's financial position should also be reported. In addition, students granted assistance are responsible for notifying the Student Aid Office of any change in program, residence, telephone number or marital status. Failure to carry out any of these responsibilities may result in cancellation of the student's award.

DEADLINE

Applicants for financial assistance for the Fall Quarter should file an application as soon after January 1 as possible. Priority in the awarding of financial assistance will be given to those students who have completed an application by July 1.

TYPES OF FINANCIAL ASSISTANCE

Scholarships

Scholarships are granted to incoming freshmen on the basis of performance and potential; and to upperclassmen for outstanding performance and achievement. In selecting recipients of scholarships, consideration is given to academic excellence, character, leadership, general accomplishment, potential and financial need. As long as the student maintains a satisfactory scholastic record and remains in need of assistance, a scholarship may be renewed annually.

Educational Opportunity Grants

The Higher Education Act of 1965 authorized an assistance program designated as Educational Opportunity Grants for students whose family resources would indicate a limited amount of financial assistance from the parents. The grant is an outright gift but must be matched by an equal amount from scholarships, loans or campus employment. Therefore, it will be necessary for the recipient of an Educational Opportunity Grant to accept a loan, scholarship or employment.

National Defense Student Loans

Since 1958, the federal government has been allocating federal funds to institutions of higher education to be loaned to students who need financial assistance to attend college. An undergraduate student

may borrow up to one thousand five hundred (\$1,500) dollars each academic year to a total of six thousand (\$6,000) dollars. Graduate students may borrow as much as twenty-five hundred (\$2,500) dollars per year to a maximum of ten thousand (\$10,000) dollars. The repayment period and interest do not begin until twelve (12) months after the student terminates his education. The loan bears interest at the rate of 3% per year and repayment of principal may be extended over a ten-year period.

If a borrower becomes a full-time teacher in an elementary or secondary school or in an institution of higher education, as much as one half of the loan may be forgiven at the rate of 10% for each year of teaching service. Borrowers who elect to teach in certain designated schools located in areas of primarily low-income families may qualify for cancellation of their entire obligation at the rate of 15% per year. Repayment may be deferred up to a total of three years while a borrower is serving in the Armed Forces, with the Peace Corps or as a Volunteer in Service to America (Vista). Repayment is deferred for as long as a borrower is enrolled in an institution of higher education and is carrying at least a half-time academic load.

Institutional Loans

University long-term loans are available in limited amounts to undergraduate students. In general, these loans do not bear interest while the student is attending an institution of higher learning. The repayment period begins three to six months after the termination of his education, at which time the interest begins to accrue at the rate of 3%. The entire loan plus interest must be repaid within a five-year period.

Short Term Loans

Students at Wright State University are eligible to borrow up to \$200 from this fund for emergency purposes. The entire amount of the loan must be paid in full by the end of the school term in which the money is borrowed, unless an extension is approved by the Student Aid Office. An extension of the normal repayment period will be given only if an extreme emergency exists. The minimum amount of repayment is \$25.00 per month.

Cuban Loans

The federal government makes available long-term, low-interest loans to Cuban Nationals who are presently in the United States and

unable to receive support from sources within Cuba as a result of actions by the Cuban Government; and who are without sufficient resources in the United States to finance their attendance at institutions of higher education.

College Work-Study Program

Students, particularly those from low-income families, who need jobs to help pay for college expenses, are potentially eligible for employment under federally supported Work-Study Programs.

Work-Study jobs are usually on campus and are available in offices, laboratories, libraries and elsewhere. A student typically works fifteen hours per week while attending classes full time. When classes are not in session, he may work up to forty hours per week.

Whenever possible, Work-Study students will be assigned to jobs compatible with their particular skills or major interests.

Supplemental Types of Financial Assistance

Guaranteed Loan Program

For a loan under this program, the student applies directly to a bank or other financial institution in his home state. If the student comes from a middle-to-upper level income family, he may more readily qualify for a Guaranteed Loan than for a National Defense Student Loan. An undergraduate may borrow as much as one thousand (\$1,000) dollars per year; a graduate student may borrow as much as one thousand five hundred (\$1,500) dollars per year.

Social Security Benefits

Extended Social Security benefits are available for children up to 22 years of age whose parent, or parents, are receiving Social Security benefits. Consult your local Social Security Office for details.

Veterans, Veterans' Widows, and Children of Deceased or Disabled Veterans

The Veterans Administration provides monthly educational allowances to certain veterans, veterans' widows, and children of deceased or disabled veterans. Contact your Veterans Administration Office or the Student Aid Office for information and application forms.



CAMPUS LIFE

Students at Wright State University are encouraged to support social and cultural activities on campus and to participate in student government. Since many student groups are in the initial stages of development, students enjoy a unique opportunity to build to new dimensions and to develop patterns of association, cooperation, and service not normally experienced among the members of an academic community.

✓ STUDENT GOVERNMENT

Student government is the recognized forum of student opinion and is concerned with matters of general policy and procedures affecting all students. Through appropriate channels it expresses its views and makes recommendations for legislative or administrative action. Participation of students appointed by student government on a wide variety of faculty and student committees encourages close communication among the faculty, students, and administration and results in positive influences upon the program of the institution.

✓ STUDENT PUBLICATIONS

The *Guardian*, the campus newspaper, is published twice each month and covers current news, articles reflecting student opinion, announcements, and special features. *Nexus*, the campus literary magazine, appears periodically and presents the creative writings, both poetry and prose, of students and others.

✓ CAMPUS CLUBS

An increasing number of clubs provide opportunities for students to explore special interests which may relate to departmental subjects, religion, politics, special services, or academic excellence. Students are encouraged not only to participate in the activities of the established clubs, but to organize other groups whose activities will accommodate an even greater portion of the student body. Students who are interested in student government, publications, or clubs should ✓ contact the Office of the Director of Student Activities in Allyn Hall.

INTRAMURAL ACTIVITIES

Facilities have been provided for a limited program of organized intramural activities. With the completion of the University Center and the development of adjacent grounds, the program will expand significantly. Men and women students who wish to participate in intramural activities are encouraged to make their interests known to the Coordinator of Intramural Activities.

✓ CULTURAL ACTIVITIES

Throughout the academic year, guest lecturers and artists are brought to the campus to present a variety of programs in broad cultural fields. In addition the Department of Music, the Department of Speech and Theatre and other campus groups present frequent programs in music and drama. A University band, chorus, and orchestra have also been organized.

COUNSELING

The University Counseling Service is located in Allyn Hall. Students are encouraged to confer with the counselors regarding problems which can best be resolved by the cooperative efforts of two individuals in absolute confidence. Special tests and survey devices are available for administration to those who wish to use standardized methods to measure their personal and vocational interests and aptitudes. An

occupational information file and a library of college catalogues are also maintained for students who wish information concerning vocational opportunities and graduate work.

✓ THE UNIVERSITY CENTER

The University Center provides facilities for social, cultural, and recreational activities for both students and the community. The Center contains lounges, conference rooms, the Bookstore, food service, and an indoor athletic area. Workrooms and office space for student publications and student government officers are also available. A wide range of recreational interests is served by the facilities for pool, ping-pong, wrestling, and other indoor sports as well as chess, cards, and table games. Shower and locker facilities are available to those using the nearby playing fields.

✓ FOOD SERVICES

Complete dining facilities are available in the University Center. Short order grill service and tables which accommodate about 300 people are provided in Allyn Hall.

✓ ACCOMMODATIONS FOR THE PHYSICALLY HANDICAPPED

Students who are confined to wheel chairs or who are otherwise handicapped need not negotiate curbs or steps to reach University classrooms or other facilities. Curb-height platforms have been installed near Allyn Hall next to reserved parking spaces and special parking permits are available in the Office of Student Activities to those who desire to use them. Elevator service is provided in all buildings and the classroom buildings are connected by underground corridors.

In addition to appropriate physical facilities, the University has a program, coordinated by the University Counseling Service, to aid handicapped students in their academic endeavors. The assistance of the University Health Service is also available to handicapped students. During the last academic year, over 100 handicapped students enrolled at Wright State University. Their handicaps ranged from quadriplegia and cerebral palsy to partial or complete blindness, epilepsy, and muteness.

One of the basic objectives of the program is to help each student derive the maximum in educational experience with a minimum loss of independence. Students attend regular university classes and meet the same academic responsibilities as all other students.

Various types of assistance have been developed for handicapped students who need them. This assistance is coordinated by the Counseling Service, but is provided on a volunteer basis by other students. The services include the following:

Readers tape textbooks for blind students. The University is developing a tape library for common curriculum courses.

Walkers acquaint new students with unfamiliar surroundings and guide them through the cafeteria service.

Writers assist students who have coordination problems.

Proctors administer tests to handicapped students who can not finish in the allotted test time. They also read the tests and write the answers for handicapped students if necessary.

Tutors are advanced students who are available to provide academic assistance and review if needed.

Drivers provide rides for wheelchair students to commute to the University when necessary.

Tapers tape class lectures for handicapped students who must be absent for a lengthy period of time.



Handicapped students who tape their class lectures and those who wish to listen to their taped textbooks may use the Language Laboratory as their study room. This room contains many individual listening booths and is available to all handicapped students.

Through this developing program, the University attempts to make it possible for the disabled student to meet his specialized needs. For further information, contact the University Counseling Service.

✓HEALTH SERVICES

The University Health Service is maintained in the basement of Allyn Hall and a registered nurse is on duty during the day. Attention is provided for routine physical discomforts and for emergencies. The advice of physicians can be secured by telephone. Fully equipped emergency service with trained personnel is available within minutes at any time.

✓RESIDENCE HALLS

The University plans to open two residence halls for students during the Summer or Fall Quarter of 1970. Further information may be obtained from the Office of Student Activities.

✓PLACEMENT SERVICE

The Placement Office provides assistance in securing full-time career employment to graduating seniors and graduate students in all disciplines. The Placement Office assists registrants through employment counseling, by providing information regarding immediate employment opportunities, by referring credentials to prospective employers, and by serving as a repository for résumés, records and recommendations. Each year representatives of schools, industry, business and governmental agencies visit this office searching for graduates with specific background, experience, and ability to fill their positions and vacancies. Only students registered with the Placement Office have the opportunity to schedule on-campus interviews with these recruiters.

Students receive employment information via campus bulletin boards, department heads, student newspaper and by visiting the Placement Office during their free time.

Students should register with the Placement Office for this free service as soon as possible after completing their Junior year.



THE DIVISION OF LIBERAL ARTS

The purpose of the Liberal Arts Division is to help the student to attain the capacities:

1. to think creatively and to communicate his thoughts effectively;
2. to evaluate wisely and judiciously the several value systems which compete for his loyalty;
3. to achieve a critical understanding of the intellectual heritage of Western and non-Western cultures;
4. to develop the discipline and resources that will permit him to continue his own education.

In summary "the aim of liberal education . . . is the enlargement of mental capacity that can come through the process of acquiring, ordering, and reflecting upon . . . information. With this widening of intellectual horizons comes the ability to see things in proportion as they really are, that is to say, the attainment of a degree of wisdom."¹

"A liberal education is not a thing of precise definition like an isosceles triangle, nor is it a fixed list of courses. . . . It is rather a human quality and a personal achievement, which can be attained in a variety of ways."²

REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE

To be eligible for the Bachelor of Arts degree, a student must have met all the university requirements (including residence, common curriculum, etc.); must have earned a cumulative average of at least 2.0 for all courses taken; must have passed at least 30 credit hours of 300-level courses applicable to the degree; and must have completed at least 186 credit hours of acceptable academic courses, including:

- I. Requirements of the common curriculum.
- II. Foreign Languages. Determined by department.
- III. The requirements of a field of concentration made up of a departmental unit of courses taken in a single department or of an interdepartmental unit of courses taken in related departments; and related courses taken in one or more other departments.

¹ Gordon N. Ray, Secretary of the Guggenheim Foundation, "Is Liberal Education Still Needed?", 1962.

² George P. Schmidt, *The Liberal Arts College*, 1957.

Hypothetical freshman program—Bachelor of Arts

ENG 11-12-13 (cc)	9
Social science (cc)	9
Biological or physical science (cc)	12
Foreign language	9-12
Electives	9-12
	<hr/> 48-54

Courses which fulfill the common curriculum requirement are followed by (cc).

FIELDS OF CONCENTRATION:

CLASSICAL HUMANITIES. *Departmental Unit:* Minimum of 36 credit hours, including one year of college Latin or Greek, in any courses in classical humanities.

Related courses: Minimum of 24 credit hours from art, history, language, literature, philosophy, and religion.

ECONOMICS. *Departmental Unit:* At least 42 credit hours in economics including EC 11-12-13, 315, 316, 317, and 9-11 hours in any sub-major (see description of sub-major in Business-Economics. Freshmen are encouraged to take EC 103. Further requirements are 18 hours of BUS 301, 302, 303 and MTH 128-129-130 (more advanced mathematics may be substituted for above).

Related courses: 7 to 10 hours chosen from upper division courses in political science, philosophy, English, psychology, sociology, geography, and history.

ENGLISH. *Departmental Unit:* Minimum credit hours: 46. Required courses: a) 250-251; b) 351 or 352, 353 or 354, 355 or 356, and one other course from this group; c) 260 (or 261); d) 361-362; e) three courses, each from a different category: 410, 420, 430, 440, 450, 460, 470, or 480. Students seeking secondary certification must take 261 and must have a minimum of eight credit hours of American literature. Shakespeare is strongly recommended for all majors.

Related courses: Minimum credit hours: 24. Required courses: HST 321-322-323 or HST 371-372-373. Additional credit must be earned in approved courses in classics, foreign literatures, philosophy, religion, history, fine arts, speech, sociology, or psychology. Consult the department for a list of approved related courses.

Students entering prior to September, 1968, and electing to complete the English major under the old requirements should consult the department for guidance in fulfilling their major requirements.

FRENCH. *Departmental Unit:* A minimum of 45 credit hours exclusive of 101-102-103, but including 201-202-203; 301, 302, 303; 321, 322, 323; 341, 342, 343; and two additional courses numbered above 400, one of which is 442.

Related courses: A minimum of 24 hours to suit the needs of the student from art, classics, English, German, political science, Greek, HST 355, 357, 359, 381, 382, 383, 399, Latin, PHL 311, 312, 442, 464; REL 410, Russian, and SPC 128. A reading knowledge of at least one other foreign language is recommended.

GEOGRAPHY. *Departmental Unit:* 45 hours. Required are GEO 11-12-13, 332, 365, 460, 470, and elective geography courses to complete the required number of credits for the major.

Related courses: A minimum of 24 credits from the general areas of behavioral, business or mathematical statistics; biological and physical sciences; social sciences, including anthropology, economics, political science, history, and sociology; and computer programming. For this requirement course work in any one department may not exceed 12 credits. Exceptions may be made only with the approval of the department chairman.

GERMAN. *Departmental Unit:* A minimum of 45 credit hours exclusive of GER 101-102-103, but including 201-202-203; 301, 302, 303; 321, 322, 323; 341, 342, 343; and at least two courses numbered above 400, one of which is 442.

Related courses: A minimum of 24 hours to suit the needs of the student chosen from art, classics, English, history, music, philosophy, religion, speech, and any foreign language courses in translation. A reading knowledge of at least one other foreign language is recommended.

GREEK. Departmental Unit: At least 24 hours in the Greek language, 12 hours in classical humanities.

Related courses: At least 24 hours chosen from Latin, history, philosophy, religion, English, modern languages.

HISTORY. Departmental Unit: A minimum of 51 quarter hours in history, including 11, 12, 13, 21, 22, 23, 498, 499, plus nine hours in American and nine hours in European, and additional electives in the department.

Related Courses: A minimum of 24 quarter hours in anthropology, art, classics, economics, literature, geography, music, philosophy, political science, religion, and sociology. Half of the related hours should be in one of these fields.

Students planning to teach social studies in secondary schools should follow the Teacher Certification (Social Studies) program. For details, see Certificate Programs in Teacher Education.

LATIN. Departmental Unit: A minimum of 36 hours in Latin, language and literature.

Related courses: A minimum of 24 hours in art, English, political science, philosophy, or other approved courses.

PHILOSOPHY. Departmental Unit: A minimum of 36 credit hours, including PHL 301, 302, 303. An integrated program in ethics or philosophy of science.

Related Courses: A minimum of 24 credit hours to fulfill a plan of integrated study.

POLITICAL SCIENCE. Departmental Unit: A minimum of 36 quarter hours, including PS 11-12-13 or 11-22-23. It is recommended that majors in political science take a course in international relations and political theory. The Department of Political Science offers courses and programs of study in American government and politics, international affairs and diplomacy, comparative government, and regional studies.

Related courses: 24 quarter hours minimum from economics, geography, history, philosophy, psychology, and sociology. To meet special needs related courses may be taken in other fields such as accountancy, business, religion, and speech.

RELIGION. Departmental Unit: A minimum of 36 quarter hours including REL 11, 12, 13.

Related courses: 27 quarter hours selected in *consultation with a member of the Religion Department* from advanced courses in art, classics, English, history, philosophy, political science, psychology, and sociology. (Honors program available for junior and senior religion majors and students with an adequate background in religion who achieve an accumulative 3.0 grade point average. For further details, contact the chairman of the department.)

SOCIOLOGY. Departmental Unit: A minimum of 40 quarter hours in sociology. SOC 11-12-13, 376, and 406 are required for a major with the remainder to be selected to suit the student's interests. Related courses: A minimum of 24 hours in related fields such as economics, political science, psychology, and history.

SPANISH. Departmental Unit: A minimum of 45 credit hours exclusive of 101-102-103, but including 301, 302, 303; 321, 322, 323; 331, 332, 333; 341, 342, 343; 361; and two additional courses numbered above 400.

Related courses: A minimum of 24 hours to suit the needs of the student. Especially recommended are literature courses, including CLS 11-12-13, 311-312, 321, and 331; ART 441, 442, 443, 444; ENG 361, 362; HST 201, 202, 203, 301, 302, 304, 305, 309, 310, 351, 352, 357, 359, 361, 362, 363, 401, 402; LI 471-472; PHL 125, 406, 442, 464; REL 410, 441, and SPC 402. A basic knowledge of at least one other foreign language is recommended.

SPEECH AND THEATRE. Departmental Unit: A minimum of 36 credit hours. Because of varied fields of interest (oral interpretation, public address, speech education, speech and hearing therapy, and theatre), courses are approved by the chairman of the department in terms of individual goals.

Related courses: A minimum of 24 credit hours chosen from courses approved in terms of their applicability to the speech field concerned, such as classics, English, history, philosophy, political science, and psychology.

OTHER PROGRAMS OF STUDY FOR SPECIALIZATION

LEADING TO A BACCALAUREATE DEGREE

ANTHROPOLOGY. *Departmental Unit:* A minimum of 36 credit hours with SOC 21-22, 23 required and remaining hours in electives from sociology-anthropology courses.

Related courses: A minimum of 36 credit hours selected in consultation with the adviser from the following areas: biology, economics, geography, geology, history, political science and psychology. Further elective work is encouraged in these disciplines.

LAW. Pre-Law students are encouraged to take a broad liberal arts program. It is suggested that the Pre-Law student declare a major in Political Science.

SOCIAL WORK. Schools of social work advise that the student who plans to take professional training concentrate in sociology, with additional work in psychology and other social sciences, and that he have as broad an education as possible. The pre-social work major is designed to: (a) prepare the student for graduate professional education in social work, (b) prepare the student to qualify for social welfare positions for which full professional education is not required, and (c) provide sufficient knowledge about social welfare programs and social work activities so that the student is able to think critically about problems, issues, and approaches to social welfare in his community.

A minimum of 45 hours in sociology including SOC 11-12 or at least two quarters of Sociology 21, 22, or 23, 341, 342, 344, 354, 355, 403, 406, 412-413-414, plus six additional hours.

Related courses: A minimum of 27 hours including PSY 11-12-13 from psychology, political science, or economics courses.

REQUIREMENTS FOR THE BACHELOR OF FINE ARTS DEGREE

Wright State University offers work leading to the Bachelor of Fine Arts degree with a joint major in painting and graphics. Candidates for the B.F.A. degree should complete the program outlined below, which includes the common curriculum. However, a degree is recommended not simply for compliance with regulations. Rather, the faculty bases its recommendations for degrees on consideration of qualities of mind, character, ability, growth, and professional promise, as well as on completion of formal requirements.

CURRICULUM—BACHELOR OF FINE ARTS DEGREE

<i>Freshman Year</i>		<i>Sophomore Year</i>	
ART 101-2-3	12	ART 201-2-3	9
ENG 11-12-13	9	ART 221-2-3	9
BIO 11-12-13	12	ART 241-2	6
Social science (cc)	9	ART 251-2-3	6
—	—	Physical science (cc)	12
42		Humanities (cc)	9
			51
<i>Junior Year</i>		<i>Senior Year</i>	
ART 311-2-3	9	ART 411-2-3	9
ART 321-2-3	9	ART 421-2-3	9
ART 351-2-3	6	ART 443-4	6
ART 441-2	6	ART 451-2-3	6
Social science (cc)	9	Electives	15
Electives	6		—
	45		45

REQUIREMENTS FOR THE BACHELOR OF MUSIC DEGREE

The Department of Music offers thorough four-year professional curricula leading to the degree Bachelor of Music in music education, music theory, and in applied music (piano, voice, violin, etc.).

FEES—Because of the high cost of individual instruction, special fees are charged for applied music. These are held at the reasonable quarter rate of \$20 for one lesson per week or \$40 for two. A \$5 rental fee is charged each quarter for class instruction in strings, woodwinds, and brass instruments.

MUSIC ORGANIZATIONS—Such University musical organizations as the University Band, the University Orchestra, the University Chorus, and instrumental chamber groups are open to students in all academic divisions of the University. Students who become members of an organization are given one credit hour per quarter with grades computed as a part of a student's academic point average.

GENERAL INFORMATION

The curricula of the Department of Music are designed for the serious students of music who wish to pursue careers in music education or applied music. Students who elect music education as a major may concentrate in voice, band or orchestral instruments, or piano. The major in music education meets all requirements for teacher certification in Ohio as well as many other states. In addition, the department offers opportunity to students majoring in other academic divisions of the University to enrich their lives by study in general music courses and by participation in choral or instrumental organizations.

ADMISSION REQUIREMENTS

The admission procedure for the University is described elsewhere in this catalog. In addition to this procedure the prospective music major must take the following steps:

1. An interview with the department chairman.
2. Completion of the departmental application.
3. Performance of an acceptable audition in his major performance medium.
4. Examinations in music theory and musical aptitude.
5. Assignment to an adviser from the music faculty who will process registration.

TRANSFER STUDENTS

Any student who wishes to transfer from another institution will submit a complete transcript of all previous work. The five steps described under Admission Requirements (above) will be followed. In general, courses which parallel those of the Department of Music will be accepted, as long as they meet the academic requirements of the registrar. Placement in applied music will be determined by the music faculty during the first quarter of residence. A minimum of one year of full-time study will be required of any transfer student working toward a degree.

RECITAL ATTENDANCE

The music faculty requires a high percentage of attendance at recitals, concerts, and similar lectures or performances. The development of musical repertoire, performance skills, and discriminate listening is an important part of the curriculum of music majors. The fulfillment of this requirement is necessary for graduation. A schedule of acceptable performances will be published each quarter. A music major is required to attend at least eight performances during each quarter in residence with the exception of the quarter in which he performs his senior recital.



ENSEMBLES

All students in the University are eligible to participate in the musical organizations. Membership in the University Band, Orchestra, Chorus, or any other authorized ensemble is required of all music majors throughout their period of study, as described in the curricular outlines.



APPLIED MUSIC EXAMINATIONS

A progressive course of study based on four grade levels of technical proficiency, musicianship, and repertoire has been developed in all applied music fields. Minimum requirements in each category are available to the music major and will be supplied upon request. Music majors will perform for the faculty twice each year, as follows: freshmen—end of first and third quarters; upperclassmen—end of second and third quarters.

PIANO PROFICIENCY

All music majors must pass a piano proficiency test before the end of the junior year. A copy of this test is available to students upon request.

RECITAL PERFORMANCE

During a period of four years of study, there are many opportunities for the music major to perform in class recitals and concerts. During the senior year, applied music majors will perform a solo recital; music education majors may perform a solo recital, or they may share a recital with another music major. Majors in music theory must have their compositions performed in a recital. All recitals must be approved by the music faculty upon the recommendation of the studio teacher before the student is qualified for graduation.

SENIOR COMPREHENSIVE EXAMINATION

All music majors are required to take a senior comprehensive examination at the end of the junior year.



CURRICULA LEADING TO THE BACHELOR OF MUSIC DEGREE

1. Students choosing a music curriculum should, in addition to meeting the University's general requirements for admission, have a thorough grounding in the fundamentals of music. Specifically, each student who becomes a major in music must pass an examination admitting him to MUS 101-102-103 before his registration for this course is considered final. (Students who fail to pass the examination are required to make up their deficiencies in a preparatory course, MUS 116, for which no credit is given toward a degree.)

2. The department offers majors in music education, theory of music, and in the following fields of applied music: piano, voice, organ, violin, viola, violoncello, flute, oboe, clarinet, bassoon, trumpet, French horn, and trombone. (In certain instances, students may major in fields other than those listed. Approval in advance by the music faculty must be obtained for study in and transfer of credit from another institution. The approval will include the proposed program of study, the institution in which it is to be carried on, and the individual teacher with whom it is to be pursued.)

A student majoring in one of the areas of applied music must study continuously in that field throughout his whole course, and must give a public senior recital. A student may elect to major in theory of music only after being advanced to performance level 3 in his principal performing medium, and—whatever his performing medium—to intermediate standing in piano.

To be eligible for the Bachelor of Music degree the applied music student must have a minimum cumulative average of 3.0 in his major performing medium (or, if he is a theory major, in all theory courses undertaken), and 2.0 in all other required music courses.

3. No student will be admitted to the theory of music as a major without the approval of the music faculty and without at least a 3.0 average in his previous theoretical work.

4. Violin majors are required to study viola for one quarter.

5. Viola majors are required to study violin for one quarter.

6. Any student, except the major in voice, able to pass a reading examination in French, German, or Spanish may substitute elective hours for language requirements.

**BACHELOR OF MUSIC—MAJOR IN MUSIC EDUCATION:
CONCENTRATION IN VOICE**

	<i>Credits per quarter</i>		
	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
<i>Freshman Year</i>			
MUS 110: Voice 1a	2	2	2
MUS 100: Piano; or MUS 060: Class Piano	1	1	1
MUS 101-2-3: Theory of Music	3	3	3
MUS 151-2-3: Sight Singing and Dictation	1	1	1
MUS 121-2-3: Survey of Musical Styles	2	2	2
MUS 010: University Chorus	1	1	1
ENG 11-12-13: Composition and Literature (cc)	3	3	3
ED 201-2-3: Foundations of Human Behavior (cc)	3	3	3
LI 261-2-3: Pronunciation of Foreign Languages	2	2	2
	<hr/> 18	<hr/> 18	<hr/> 18
<i>Sophomore Year</i>			
MUS 110: Voice 2a	2	2	2
MUS 100: Piano	1	1	1
MUS 201-2-3: Music Theory	3	3	3
MUS 251-2-3: Sight Singing and Dictation	1	1	1
MUS 215-6-7: String Instruments	1	1	1
MUS 224-5-6: Brass and Percussion Instruments	1	1	1
MUS 010: University Chorus	1	1	1
HST 21-22-23: Essentials of Western Culture (cc)	3	3	3
A physical science (cc)	3	3	3
	<hr/> 16	<hr/> 16	<hr/> 16
<i>Junior Year</i>			
MUS 110: Voice 3a	2	2	2
MUS 145-6-7: Voice Class Methods and Materials	1	1	1
MUS 227-8-9: Woodwind Instruments	1	1	1
MUS 311-2-3: Music History	3	3	3
MUS 327: Music in the First Six Grades	3	-	-
MUS 328: Music in the Junior High School	-	3	-
MUS 329: Music in the Senior High School	-	-	3
MUS 335-6-7: Conducting	2	2	2
MUS 010: University Chorus	1	1	1
A biological science (cc)	3	3	3
	<hr/> 16	<hr/> 16	<hr/> 16
<i>Senior Year</i>			
MUS 110: Voice 4a	2	2	2
MUS 324-5: Methods in Music (Bands & Orchestras)	-	2	2
MUS 421-2-3: Orchestration	2	2	2
MUS 481: Special Studies in Music	2	2	2
MUS 010: University Chorus	1	1	1
ED 429: Supervised Teaching	4	4	4
ED 422: Educational Organization	2	-	-
ED 464: Evaluation	-	3	-
ED 440: Senior Seminar in Education	-	-	3
A social science (cc)	3	3	3
	<hr/> 16	<hr/> 19	<hr/> 19

Note: Courses which fulfill the common curriculum requirement are followed by (cc).

Note: Any deviation from the programs must be approved by the Department Chairman.

BACHELOR OF MUSIC—MAJOR IN MUSIC EDUCATION: CONCENTRATION IN BAND AND ORCHESTRAL INSTRUMENTS

<i>Freshman Year</i>	<i>Credits per quarter</i>		
	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Applied Music 1a (concentration)	2	2	2
MUS 100: Piano; or Music 060: Class Piano	1	1	1
MUS 101-2-3: Theory of Music	3	3	3
MUS 151-2-3: Sight Singing and Dictation	1	1	1
MUS 121-2-3: Survey of Musical Styles	2	2	2
MUS 224-5-6: Brass and Percussion Instruments	1	1	1
MUS 010: University Chorus	1	1	1
*MUS 020: University Band; or MUS 040: University Orchestra ..	1	1	1
ENG 11-2-3: Composition and Literature (cc)	3	3	3
ED 201-2-3: Foundations of Human Behavior (cc)	3	3	3
	<hr/> 18	<hr/> 18	<hr/> 18

<i>Sophomore Year</i>	<i>Credits per quarter</i>		
	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Applied Music 2a (concentration)	2	2	2
MUS 100: Piano	1	1	1
MUS 201-2-3: Music Theory	3	3	3
MUS 251-2-3: Sight Singing and Dictation	1	1	1
MUS 145-6-7: Voice Class Methods and Materials	1	1	1
MUS 215-6-7: String Instruments	1	1	1
MUS 010: University Chorus	1	1	1
*MUS 020: University Band; or MUS 040: University Orchestra ..	1	1	1
HST 21-2-3: Essentials of Western Culture (cc)	3	3	3
A physical science (cc)	3	3	3
	<hr/> 17	<hr/> 17	<hr/> 17

<i>Junior Year</i>	<i>Credits per quarter</i>		
	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Applied Music 3a (concentration)	2	2	2
MUS 227-8-9: Wind Instruments	1	1	1
MUS 311-2-3: Music History	3	3	3
MUS 323-4-5: Methods in Music (Bands and Orchestras)	2	2	2
MUS 327: Music in the First Six Grades	3	-	-
MUS 328: Music in the Junior High School	-	3	-
MUS 329: Music in the Senior High School	-	-	3
MUS 335-6-7: Conducting	2	2	2
*MUS 020: University Band; or MUS 040: University Orchestra ..	1	1	1
A biological science (cc)	3	3	3
	<hr/> 17	<hr/> 17	<hr/> 17

<i>Senior Year</i>	<i>Credits per quarter</i>		
	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Applied Music 4a (concentration)	2	2	2
MUS 421-2-3: Orchestration	2	2	2
MUS 481: Special Studies in Music	2	2	2
*MUS 020: University Band; or MUS 040: University Orchestra ..	1	1	1
ED 429: Supervised Teaching	4	4	4
ED 422: Educational Organization	2	-	-
ED 464: Evaluation	-	3	-
ED 440: Senior Seminar in Education	-	-	3
A social science (cc)	3	3	3
	<hr/> 16	<hr/> 17	<hr/> 17

*String majors will register for orchestra; wind and percussion majors will register for band.

BACHELOR OF MUSIC—MAJOR IN MUSIC EDUCATION: CONCENTRATION IN PIANO, SECONDARY CONCENTRATION IN VOICE

<i>Freshman Year</i>	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
MUS 100: Piano 1a	2	2	2
MUS 110: Voice 1a	1	1	1
MUS 101-2-3: Theory of Music	3	3	3
MUS 151-2-3: Sight Singing and Dictation	1	1	1
MUS 121-2-3: Survey of Musical Styles	2	2	2
MUS 010: University Chorus	1	1	1
ENG 11-12-13: Composition and Literature (cc)	3	3	3
ED 201-2-3: Foundations of Human Behavior (cc)	3	3	3
LI 261-2-3: Pronunciation of Foreign Languages	2	2	2
	<hr/> 18	<hr/> 18	<hr/> 18

<i>Sophomore Year</i>	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
MUS 100: Piano 2a	2	2	2
MUS 110: Voice 2a	1	1	1
MUS 201-2-3: Music Theory	3	3	3
MUS 251-2-3: Sight Singing and Dictation	1	1	1
MUS 215-6-7: String Instruments	1	1	1
MUS 224-5-6: Brass and Percussion Instruments	1	1	1
MUS 010: University Chorus	1	1	1
HST 21-22-23: Essentials of Western Culture (cc)	3	3	3
A physical science (cc)	3	3	3
	<hr/> 16	<hr/> 16	<hr/> 16

<i>Junior Year</i>	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
MUS 100: Piano 3a	2	2	2
MUS 145-6-7: Voice Class Methods and Materials	1	1	1
MUS 227-8-9: Woodwind Instruments	1	1	1
MUS 311-2-3: Music History	3	3	3
MUS 327: Music in the First Six Grades	3	-	-
MUS 328: Music in the Junior High School	-	3	-
MUS 329: Music in the Senior High School	-	-	3
MUS 335-6-7: Conducting	2	2	2
MUS 010: University Chorus	1	1	1
A biological science (cc)	3	3	3
	<hr/> 16	<hr/> 16	<hr/> 16

*Credits per quarter**Senior Year*

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
MUS 100: Piano 4a	2	2	2
MUS 324-5: Methods in Music (Bands & Orchestras)	-	2	2
MUS 421-2-3: Orchestration	2	2	2
MUS 481: Special Studies in Music	2	2	2
MUS 010: University Chorus	1	1	1
ED 429: Supervised Teaching	4	4	4
ED 422: Educational Organization	2	-	-
ED 464: Evaluation	-	3	-
ED 440: Senior Seminar in Education	-	-	3
A social science (cc)	3	3	3
	<hr/> 16	<hr/> 19	<hr/> 19

BACHELOR OF MUSIC—MAJOR IN MUSIC EDUCATION: CONCENTRATION IN PIANO; SECONDARY CONCENTRATION IN BAND AND ORCHESTRAL INSTRUMENTS

Freshman Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
MUS 100: Piano 1a	2	2	2
Applied Music 1a (secondary concentration)	1	1	1
MUS 101-2-3: Theory of Music	3	3	3
MUS 151-2-3: Sight Singing and Dictation	1	1	1
MUS 121-2-3: Survey of Musical Styles	2	2	2
MUS 224-5-6: Brass and Percussion Instruments	1	1	1
MUS 010: University Chorus	1	1	1
*MUS 020: University Band; or MUS 040: University Orchestra ..	1	1	1
ENG 11-2-3: Composition and Literature (cc)	3	3	3
ED 201-2-3: Foundations of Human Behavior (cc)	3	3	3
	<hr/> 18	<hr/> 18	<hr/> 18

Sophomore Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
MUS 100: Piano 2a	2	2	2
Applied Music 2a (secondary concentration)	1	1	1
MUS 201-2-3: Music Theory	3	3	3
MUS 251-2-3: Sight Singing and Dictation	1	1	1
MUS 145-6-7: Voice Class Methods and Materials	1	1	1
MUS 215-6-7: String Instruments	1	1	1
MUS 010: University Chorus	1	1	1
*MUS 020: University Band; or MUS 040: University Orchestra ..	1	1	1
HST 21-2-3: Essentials of Western Culture (cc)	3	3	3
A physical science (cc)	3	3	3
	<hr/> 17	<hr/> 17	<hr/> 17

Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
MUS 100: Piano 3a	2	2	2
MUS 227-8-9: Woodwind Instruments	1	1	1
MUS 311-2-3: Music History	3	3	3
MUS 323-4-5: Methods in Music (Bands & Orchestras)	2	2	2
MUS 327: Music in the First Six Grades	3	-	-
MUS 328: Music in the Junior High School	-	3	-
MUS 329: Music in the Senior High School	-	-	3
MUS 335-6-7: Conducting	2	2	2
*MUS 020: University Band; or MUS 040: University Orchestra ..	1	1	1
A biological science (cc)	3	3	3
	<hr/> 17	<hr/> 17	<hr/> 17

<i>Senior Year</i>	<i>Credits per quarter</i>		
	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
MUS 100: Piano 4a	2	2	2
MUS 421-2-3: Orchestration	2	2	2
MUS 481: Special Studies in Music	2	2	2
*MUS 020: University Band; or MUS 040: University Orchestra ..	1	1	1
ED 429: Supervised Teaching	4	4	4
ED 422: Educational Organization	2	-	-
ED 464: Evaluation	-	3	-
ED 440: Senior Seminar in Education	-	-	3
A social science (cc)	3	3	3
*String majors will register for orchestra; wind and percussion majors will register for band.	—	—	—
	16	17	17

BACHELOR OF MUSIC—MAJOR IN VOICE

<i>Freshman Year</i>	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
MUS 110: Voice 1	4	4	4
MUS 100: Piano; or Music 060: Class Piano	1	1	1
MUS 101-2-3: Theory of Music	3	3	3
MUS 151-2-3: Sight Singing and Dictation	1	1	1
MUS 121-2-3: Survey of Musical Styles	2	2	2
MUS 010: University Chorus	1	1	1
ENG 11-12-13: Composition and Literature (cc)	3	3	3
LI 261-2-3: Pronunciation of Foreign Languages	2	2	2
	—	—	—
	17	17	17

<i>Sophomore Year</i>	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
MUS 110: Voice 2	4	4	4
MUS 100: Piano	1	1	1
MUS 201-2-3: Music Theory	3	3	3
MUS 251-2-3: Sight Singing and Dictation	1	1	1
MUS 010: University Chorus	1	1	1
FR, GER, or SPN 201-2-3	3	3	3
HST 21-2-3: Essentials of Western Culture (cc)	3	3	3
A physical science (cc)	3	3	3
	—	—	—
	19	19	19

<i>Junior Year</i>	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
MUS 110: Voice 3	4	4	4
MUS 301-2-3: Counterpoint	3	3	3
MUS 351-2-3: Sight Singing and Dictation	1	1	1
MUS 010: University Chorus	1	1	1
A biological science (cc)	3	3	3
A social science (cc)	3	3	3
A social science (cc)	3	3	3
	—	—	—
	18	18	18

<i>Senior Year</i>	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
MUS 110: Voice 4	4	4	4
MUS 311-2-3: Music History	3	3	3
MUS 320: Opera Production	2	2	2
MUS 335-6-7: Conducting	2	2	2
MUS 420: Opera Coaching	1	1	1
MUS 441-2: Pedagogy	1	1	-
MUS 010: University Chorus	1	1	1
MUS 481: Special Studies in Music	2	2	2
	—	—	—
	16	16	15

BACHELOR OF MUSIC—MAJOR IN PIANO

	<i>Credits per quarter</i>		
	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
<i>Freshman Year</i>			
MUS 100: Piano 1	4	4	4
MUS 101-2-3: Theory of Music	3	3	3
MUS 151-2-3: Sight Singing and Dictation	1	1	1
MUS 121-2-3: Survey of Musical Styles	2	2	2
MUS 010: University Chorus	1	1	1
ENG 11-2-3: Composition and Literature (cc)	3	3	3
A social science (cc)	3	3	3
	<hr/> 17	<hr/> 17	<hr/> 17
<i>Sophomore Year</i>			
MUS 100: Piano 2	4	4	4
MUS 201-2-3: Music Theory	3	3	3
MUS 251-2-3: Sight Singing and Dictation	1	1	1
MUS 010: University Chorus	1	1	1
HST 21-2-3: Essentials of Western Culture (cc)	3	3	3
FR, GER, or SPN 201-2-3	3	3	3
A biological science (cc)	3	3	3
	<hr/> 18	<hr/> 18	<hr/> 18
<i>Junior Year</i>			
MUS 100: Piano 3	4	4	4
MUS 301-2-3: Counterpoint	3	3	3
MUS 311-2-3: Music History	3	3	3
MUS 351-2-3: Sight Singing and Dictation	1	1	1
MUS 010: University chorus	1	1	1
A social science (cc)	3	3	3
A physical science (cc)	3	3	3
	<hr/> 18	<hr/> 18	<hr/> 18
<i>Senior Year</i>			
MUS 100: Piano 4	4	4	4
MUS 335-6-7: Conducting	2	2	2
MUS 401-2-3: Form and Analysis	3	3	3
MUS 441-2: Pedagogy	1	1	-
MUS 451-2-3: Piano Literature	2	2	2
MUS 481: Special Studies in Music	2	2	2
MUS 050: Chamber Music	1	1	1
MUS 070: Accompanying	1	1	1
	<hr/> 16	<hr/> 16	<hr/> 16

BACHELOR OF MUSIC—MAJOR IN ORGAN

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
<i>Freshman Year</i>			
MUS 160: Organ 1	4	4	4
MUS 101-2-3: Theory of Music	3	3	3
MUS 151-2-3: Sight Singing and Dictation	1	1	1
MUS 121-2-3: Survey of Musical Styles	2	2	2
MUS 010: University Chorus	1	1	1
ENG 11-2-3: Composition and Literature (cc)	3	3	3
A social science (cc)	3	3	3
	<hr/> 17	<hr/> 17	<hr/> 17

	<i>Credits per quarter</i>		
	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
<i>Sophomore Year</i>			
MUS 160: Organ 2	4	4	4
MUS 145-6-7: Voice Class Methods and Materials	1	1	1
MUS 201-2-3: Music Theory	3	3	3
MUS 251-2-3: Sight Singing and Dictation	1	1	1
MUS 010: University Chorus	1	1	1
HST 21-2-3: Essentials of Western Culture (cc)	3	3	3
FR, GER, or SPN 201-2-3	3	3	3
A biological science (cc)	3	3	3
	19	19	19
<i>Junior Year</i>			
MUS 160: Organ 3	4	4	4
MUS 301-2-3: Counterpoint	3	3	3
MUS 311-2-3: Music History	3	3	3
MUS 351-2-3: Sight Singing and Dictation	1	1	1
MUS 010: University Chorus	1	1	1
A social science (cc)	3	3	3
A physical science (cc)	3	3	3
	18	18	18
<i>Senior Year</i>			
MUS 160: Organ 4	4	4	4
MUS 335-6-7: Conducting	2	2	2
MUS 401-2-3: Form and Analysis	3	3	3
MUS 441-2: Pedagogy	1	1	-
MUS 481: Special Studies in Music	2	2	2
MUS 050: Chamber Music	1	1	1
MUS 070: Accompanying	1	1	1
Elective from Department of Religion	3	3	3
	17	17	16

BACHELOR OF MUSIC—MAJOR IN STRINGS

	<i>Credits per quarter</i>		
	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
<i>Freshman Year</i>			
Applied Music 1 (concentration)	4	4	4
MUS 100: Piano; or MUS 060: Class Piano	1	1	1
MUS 101-2-3: Theory of Music	3	3	3
MUS 151-2-3: Sight Singing and Dictation	1	1	1
MUS 121-2-3: Survey of Musical Styles	2	2	2
MUS 010: University Chorus	1	1	1
MUS 040: University Orchestra	1	1	1
ENG 11-2-3: Composition and Literature (cc)	3	3	3
A social science (cc)	3	3	3
	19	19	19
<i>Sophomore Year</i>			
Applied Music 2 (concentration)	4	4	4
MUS 100: Piano	1	1	1
MUS 201-2-3: Music Theory	3	3	3
MUS 251-2-3: Sight Singing and Dictation	1	1	1
MUS 040: University Orchestra	1	1	1
HST 21-2-3: Essentials of Western Culture (cc)	3	3	3
FR, GER, or SPN 201-2-3	3	3	3
A biological science (cc)	3	3	3
	19	19	19

	<i>Credits per quarter</i>		
	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
<i>Junior Year</i>			
Applied Music 3 (concentration)	4	4	4
MUS 301-2-3: Counterpoint	3	3	3
MUS 311-2-3: Music History	3	3	3
MUS 351-2-3: Sight Singing and Dictation	1	1	1
MUS 040: University Orchestra	1	1	1
A social science (cc)	3	3	3
A physical science (cc)	3	3	3
	18	18	18
<i>Senior Year</i>			
Applied Music 4 (concentration)	4	4	4
MUS 215-6-7: String Instruments	1	1	1
MUS 335-6-7: Conducting	2	2	2
MUS 421-2-3: Orchestration	2	2	2
MUS 441-2: Pedagogy	1	1	-
MUS 481: Special Studies in Music	2	2	2
MUS 040: University Orchestra	1	1	1
MUS 050: Chamber Music	1	1	1
	14	14	13

BACHELOR IN MUSIC—MAJOR IN WINDS

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
<i>Freshman Year</i>			
Applied Music 1 (concentration)	4	4	4
MUS 100: Piano; or Music 060: Class Piano	1	1	1
MUS 101-2-3: Theory of Music	3	3	3
MUS 151-2-3: Sight Singing and Dictation	1	1	1
MUS 121-2-3: Survey of Musical Styles	2	2	2
MUS 010: University Chorus	1	1	1
MUS 020: Band	1	1	1
ENG 11-2-3: Composition and Literature (cc)	3	3	3
A social science (cc)	3	3	3
	19	19	19
<i>Sophomore Year</i>			
Applied Music 2 (concentration)	4	4	4
MUS 100: Piano	1	1	1
MUS 201-2-3: Music Theory	3	3	3
MUS 251-2-3: Sight Singing and Dictation	1	1	1
MUS 020: University Band; or MUS 040: University Orchestra	1	1	1
HST 21-2-3: Essentials of Western Culture (cc)	3	3	3
FR, GER, or SPN 201-2-3	3	3	3
A biological science (cc)	3	3	3
	19	19	19
<i>Junior Year</i>			
Applied Music 3 (concentration)	4	4	4
MUS 301-2-3: Counterpoint	3	3	3
MUS 311-2-3: Music History	3	3	3
MUS 351-2-3: Sight Singing and Dictation	1	1	1
MUS 020: University Band; or MUS 040: University Orchestra	1	1	1
A social science (cc)	3	3	3
A physical science (cc)	3	3	3
	18	18	18

	<i>Credits per quarter</i>		
	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
<i>Senior Year</i>			
Applied Music 4 (concentration)	4	4	4
MUS 335-6-7: Conducting	2	2	2
MUS 401-2-3: Form and Analysis	3	3	3
MUS 421-2-3: Orchestration	2	2	2
MUS 441-2: Pedagogy	1	1	-
MUS 020: University Band	1	1	1
MUS 040: University Orchestra	1	1	1
MUS 050: Chamber Music	1	1	1
	<hr/>	<hr/>	<hr/>
	15	15	14

BACHELOR OF MUSIC—MAJOR IN THEORY

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
<i>Freshman Year</i>			
Applied Music 1 (concentration)	4	4	4
Applied Music 1 (secondary)	1	1	1
MUS 101-2-3: Theory of Music	3	3	3
MUS 151-2-3: Sight Singing and Dictation	1	1	1
MUS 121-2-3: Survey of Musical Styles	2	2	2
MUS 010: University Chorus	1	1	1
Ensemble in Major concentration	1	1	1
ENG 11-2-3: Composition and Literature (cc)	3	3	3
A social science (cc)	3	3	3
	<hr/>	<hr/>	<hr/>
	19	19	19

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
<i>Sophomore Year</i>			
Applied Music 2 (concentration)	4	4	4
Applied Music 2 (secondary)	1	1	1
MUS 201-2-3: Music Theory	3	3	3
MUS 251-2-3: Sight Singing and Dictation	1	1	1
Ensemble in Major concentration	1	1	1
HST 21-2-3: Essentials of Western Culture (cc)	3	3	3
FR, GER, or SPN 201-2-3	3	3	3
A biological science (cc)	3	3	3
	<hr/>	<hr/>	<hr/>
	19	19	19

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
<i>Junior Year</i>			
MUS 301-2-3: Counterpoint	3	3	3
MUS 311-2-3: Music History	3	3	3
MUS 351-2-3: Sight Singing and Dictation	1	1	1
Ensemble in major concentration	1	1	1
A social science (cc)	3	3	3
A physical science (cc)	3	3	3
	<hr/>	<hr/>	<hr/>
	14	14	14

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
<i>Senior Year</i>			
MUS 335-6-7: Conducting	2	2	2
MUS 401-2-3: Form and Analysis	3	3	3
MUS 421-2-3: Orchestration	2	2	2
MUS 471-2-3: Composition	3	3	3
MUS 481: Special Studies in Music	2	2	2
Ensemble in major concentration	1	1	1
MUS 050: Chamber Music	1	1	1
	<hr/>	<hr/>	<hr/>
	14	14	14



THE DIVISION OF BUSINESS ADMINISTRATION

The objective of the Division of Business Administration is to direct the education of men and women of character and intellectual ability for positions in business. Upon graduation, their preparation should be such that, with experience, they should be able to assume administrative or executive responsibilities.

REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN BUSINESS DEGREE

Each candidate for the degree Bachelor of Science in Business must (1) earn a minimum of 186 quarter hours, 60 of them in the common curriculum, (2) achieve a minimum cumulative grade average of 2.0 on all work undertaken, and (3) fulfill the course requirements of one of the several curricula in addition to complying with the University regulations regarding residence.

These general curricula are Accountancy, Business-Economics, Finance, General Business, Management, and Marketing.

FIELDS OF SPECIALIZATION

Students pursuing a course leading to the degree Bachelor of Science in Business have six basic curricula from which to choose. At the beginning of the freshman year each student is assigned to an adviser in the department in which he elects to specialize. The choice of the curriculum is not irrevocable, however, and students may transfer from one field to another during the sophomore year and frequently as late as the middle of the junior year.

A student may elect if he wishes, with permission of the Dean of the Division of Business Administration, to choose a dual or combined major. However, most students will normally prefer to elect one of the several more specialized curricula that is offered through each of the departments. The details of the specialized curricula are available from the student's adviser and in each case will meet the general requirements of the student's elected major field.

The six general curricula together with the lists of more specialized curricula available in each department are listed as follows:

ACCOUNTANCY (ACC): certified public accounting, commercial and industrial accounting, governmental accounting, financial accounting, accounting systems, tax accounting, pre-law, Federal Bureau of Investigation.

BUSINESS-ECONOMICS (EC): economic development, economic history, general economics, international economics, labor economics, monetary economics, public finance and taxation, quantitative economics.

FINANCE (FIN): financial management, investment management and analysis, management of financial institutions, real estate.

GENERAL BUSINESS (BUS): quantitative business analysis, office administration and secretarial practice, pre-law, business-science, technically combined curriculum.

MANAGEMENT (MGT): general management, production management, research and development management, personnel administration, industrial labor relations.

MARKETING (MKT): physical distribution management, sales management, industrial marketing, international marketing, retail management, advertising management, marketing research.

FRESHMAN AND SOPHOMORE YEARS

The course requirements of the freshman and sophomore years are the same for most curricula. Minor variations in sequence of courses and in number of credit hours per quarter are permitted with the consent of the adviser.

<i>Freshman year</i>	<i>Hours</i>
BUS 101-102 Business Administration	6
ENG 11-12-13 Basic Composition and Literature (cc)	9
MTH 128-129-130 Elementary Linear Mathematics, Finite Probability Models, and College Algebra	9
(more advanced mathematics may be substituted for above)	
A social science (cc) (one of the following to be elected)	9
GEO 11-12-13 Principles of Modern Geography	
PS 11-12-13 Politics & The American Political System	
PS 21-22-23 International Politics	
HST 11-12-13 American Civilization	
PSY 11-12-13 Elementary Psychology	
SOC 11-12-13 Introductory Sociology	
SOC 21-22-23 General Anthropology	
BIO (cc) 11-12-13	12
Electives (Business students regardless of major are encouraged to elect one of the following)	3
ACC 103 Income Tax Planning	
EC 103 Evolution of American Industrial Society	
FIN 103 Personal Finance	
MGT 103 History of Management Thought	
MKT 103 Historical Development of Marketing Institutions	
	<hr/>
	48
<i>Sophomore year</i>	
ACC 201-202-203 Accounting Concepts and Principles	9
EC (cc) 11-12-13 Principles of Economics	9
A humanities course (cc) (one of the following to be elected)	9
CLS 11-12-13 Classical Humanities	
ENG 21-22-23 Life & Thought in European Literature	
ENG 31-32-33 Life & Thought in English Literature	
ENG 41-42-43 Life & Thought in American Literature	
ENG 51-52-53 Introduction to Fiction, Poetry, Drama	

HST 21-22-23 Western Culture	
PHL 11-12-13 Introduction to Philosophy	
REL 11-12-13 Religion in History and Culture	
A physical science (cc) (one of the following to be elected)	12
Chemistry	
Geology	
Physics	
BUS 301-302-303 Quantitative Core or Electives (may be taken in junior year)	9
	<hr/> 48

NOTE: Courses which fulfill the common curriculum requirements are followed by (cc).

JUNIOR AND SENIOR YEARS

A candidate for the Bachelor of Science in Business degree, regardless of the major field elected, is required to earn credit in 39 hours of basic or core courses. The Quantitative Core may be taken during the sophomore year; in fact, this is encouraged. Junior year requirements are BUS 301-302-303, Quantitative Core (9); EC 301, Money and Banking (EC 315 and/or 317 may be substituted in some of the sub-curricula (3 or 4); FIN 301-302, Introduction to Business Finance and Financial Management (6); MGT 301-302, Principles of Management and Introduction to Organizational Behavior (6); MKT 301-302, Marketing and Marketing Management (6). In addition, ENG 331, Business Writing (3) is required. Senior year basic courses are BUS 401, Business Law I, (3); BUS 481, Business Policy (3); and BUS 482, Government and Business (3).

The remaining courses of the junior and senior years vary among the several major fields. In each case, there are three categories of requirements: (1) required professional courses, (2) professional electives, and (3) non-professional electives. Professional elective courses may be selected from offerings of the departments of Accountancy, Business, Economics, Finance, Management, and Marketing. Non-professional elective course may be selected from departments of the University other than in Business Administration. Advanced economics credit may count as non-professional electives. With the exception of courses in the Department of Speech and Theater, non-professional electives should be upper division courses.

Basic courses required in junior and senior years for all majors:

	<i>Hours</i>
BUS 301 Introduction to Statistical Analysis	3*
BUS 302 Introduction to Statistical Inference	3*
BUS 303 Introduction to Operations Research Techniques	3*
EC 301 Money and Banking	3
or	
EC 315 Intermediate Price Theory	4
or	
EC 317 Intermediate National Income Analysis	4
FIN 301 Introduction to Business Finance I	3
FIN 302 Introduction to Business Finance II	3
MGT 301 Principles of Management	3
MGT 302 Introduction to Organizational Behavior	3
MKT 301 Marketing in the Economy	3
MKT 302 Marketing Management	3
BUS 401 Contracts	3

	<i>Hours</i>
BUS 481 Business Policy	3
BUS 482 Government and Business	3
ENG 331 Business Writing	3
	<u>42-43</u>

*NOTE: Electives may be substituted when courses are taken in sophomore year.

A summary of common courses required of all business majors:

Common curriculum	60
Mathematics	9
English (other than common curriculum)	3
Business and Economics (other than common curriculum)	54
	<u>126</u>

SPECIALIZATION AND MAJOR

The remaining hours (over the 126 common hours) taken in the degree program are divided between those which constitute the major and electives. In each of the six departments of the division there is designed a basic or general major and the opportunity, in most departments, to elect more specialized curriculum. All business majors must take a minimum of 60 hours other than the above common courses bringing the total hours to 186. In some of the specialized curriculum up to six additional hours may be required.

ACCOUNTANCY (ACC)

Those students who elect to major in the accounting field may prepare themselves for a variety of careers in this area of concentration as well as fulfilling the education requirements to take the Certified Public Accountant (C.P.A.) examination in the State of Ohio. This major also provides an excellent undergraduate background for a degree in law. While only one general program is offered, the careful selection of electives under the guidance of a student's faculty adviser leads to a variety of career preparations.

Specifically, the accounting major will take the following additional courses in the junior and senior Year:

	<i>Hours</i>
ACC 301 Managerial Accounting	3
ACC 302-303 Intermediate Accounting I & II	6
ACC 311-312 Advanced Accounting I & II	6
ACC 321 Cost Accounting I	3
ACC 331 Income Tax Accounting I	3
ACC 411 Accounting Systems I	3
ACC 421 Auditing I	3
ACC 499 Senior Seminar	3
Two of the following:	
ACC 322 Cost Accounting II	3
ACC 332 Income Tax Accounting II	3
ACC 412 Accounting Systems II	3
ACC 422 Auditing II	3
ACC 431 Governmental Accounting	6
FIN 303 Case Problems in Finance	3
BUS 402 Business Law II or BUS 403 Business Law III	3
Professional Electives	6
Non-Professional Electives	12
	<u>60</u>

BUSINESS-ECONOMICS (EC)

The business-economics major will take a minimum of 42 credit hours in economics. Freshmen are encouraged to take EC 103, Evolution of American Industrial Society. In addition to EC 11-12-13, the following requirements will be met:

<i>Economic Development</i>	<i>Hours</i>
EC 315 Intermediate Price Theory	4
EC 316 Institutional Economics	4
EC 317 Intermediate National Income Analysis	4
Courses in sub-major*	9-11
Electives in economics	10-12
Professional and/or non-professional electives	30
	<hr/> 63

*The sub-major requirement consists of a three-course sequence (9-11 hours) in one of the following areas of concentration: economic development, economic history, general economics, international economics, labor economics, monetary economics, public finance and taxation, and quantitative economics.

<i>Economic Development</i>	
EC 441 International Economics I	4
EC 444 Economics of Development	4
EC 447 Economic Development: China	3
or	or
EC 448 Economic Development: Tropical Africa	3

<i>Economic History</i>	
EC 321 European Economic History	3
EC 353 History of American Labor Movement	4
EC 493 Seminar in Economic History	3

General Economics

A student may elect any 11 hours in upper division economics courses.

International Economics

EC 441 International Economics I	4
EC 442 International Economics II	4
EC 495 Seminar in International Economics	3

Labor Economics

EC 351 Labor Economics	4
EC 454 Economics of Collective Bargaining	4
EC 496 Seminar in Labor Economics	3

Monetary Economics

EC 301 Money and Banking	3
EC 402 Monetary Theory	3
EC 491 Seminar in Monetary Theory	3

Public Finance and Taxation

EC 431 Federal Public Finance and Taxation	4
EC 432 State and Local Public Finance and Taxation	4
EC 494 Seminar in Public Finance	3

Quantitative Economics

EC 409 Introduction to Econometrics	3
EC 410 Mathematical Economics	3
EC 492 Seminar in Econometrics	3

(MTH 228-229, Calculus (6), must be elected as professional elective.)

FINANCE (FIN)

It is anticipated that students majoring in finance will be able to follow one of several alternate programs designed to give them a degree of specialization in a specific area of finance, while at the same time providing them with a core of finance courses which will allow them to be well-rounded in all aspects of theory and principles of finance.

In the junior year, the finance major must elect to take EC 301, Money and Banking, as a part of the basic courses for all business majors. In addition to taking all the courses required of all business majors, the finance student must take the following basic courses:

	<i>Hours</i>
FIN 401 Investment Management	3
FIN 411 Financial Institutions	3
ACC 302-303 Intermediate Accounting I & II	6
	<hr/> 12

The finance major must then choose an area of concentration and take the recommended courses; or as an alternative to choosing an area of concentration, he may take two additional finance courses of his choice.

*Hours**Financial Management*

FIN 303 Financial Policies of Corporations	3
ACC 301 Managerial Accounting	3
EC 315 Intermediate Price Theory	
or	
EC 402 Monetary Theory	3-4

Investment Management and Analysis

FIN 402 Security Analysis	3
FIN 480 Money and Capital Markets	3
FIN 351 Principles of Insurance	
or	
FIN 431 Real Estate	3-4
EC 402 Monetary Theory	
or	
EC 417 Intermediate National Income Analysis	3

Management of Financial Institutions

FIN 412 Commercial Banking	3
FIN 480 Money and Capital Markets	3
FIN 351 Principles of Insurance	
or	
FIN 431 Real Estate	3-4
EC 402 Monetary Theory	3

Real Estate

FIN 431 Real Estate	4
FIN 480 Money and Capital Markets	3
BUS 402-403 Business Law	6
PS 315 Public Administration	3

In addition, the finance student must elect to take 12-27 hours of professional electives and 12-27 hours of non-professional electives.



GENERAL BUSINESS (BUS)

Students who elect a major in Business Administration other than in Accountancy, Business-Economics, Finance, Management, or Marketing may elect a concentration in General Business; however, this major consists of two distinct sub-major programs (quantitative business analysis and office administration) as well as designed programs for pre-legal, business science, and technically combined curriculum. This major is not designed to be a "catch-all program," but rather is designed to be administered by the business department. All majors listed below will take the 126 common hours.

Sub-Major in Quantitative Business Analysis

For the student who wishes to concentrate in the quantitative area of business decision making, the following curriculum serves as a basic guide:

	<i>Hours</i>
BUS 311 Introduction to Data Processing	3
BUS 312 Electronic Data Processing	3
BUS 411 Quantitative Methods for Business Decisions	3
BUS 412 Application of Operations Research Techniques	3
BUS 413 Computer Systems in Modern Organization: Theory and Application	3
BUS 491 Seminar in Quantitative Analysis	3
A minimum of three advanced courses in one of the other major areas	9
	<u>27</u>

In addition, the quantitative major must take one of the following mathematics sequences:

MTH 228-229 Calculus	6
or	
MTH 132-133-231-232 Calculus	20
and	

a minimum of nine non-professional electives. The remaining hours may be taken in either business or non-professional electives.

Sub-Major in Office Administration

Concentration in office administration is intended for those students who wish to seek a professional career in business through the office. A career in the office can lead to two professional opportunities: an office administrative position, or an executive secretarial position.

Office Administration Concentration

	<i>Hours</i>
OA 201 Beginning Shorthand*	3
OA 202 Intermediate Shorthand	3
OA 203 Advanced Shorthand	3
OA 211 Beginning Typewriting*	2
OA 212 Intermediate Typewriting	2
OA 213 Advanced Typewriting	2
OA 301 Beginning Transcription	3
OA 302 Advanced Transcription	3
OA 305 Office Machines	2
OA 401 Office Practicum	1-3
OA 402 Problems in Office Administration	1-3
OA 405 Records Management	1
OA 411 Office Management and Administration	3
	<hr/> 24-33

Professional and non-professional electives

(minimum of 15 must be non-professional) 33-42

*Not required of all students.

Pre-Law Major

A student choosing a law career combined with pre-law training in business administration (other than accounting) may do the following work to accomplish this goal:

	<i>Hours</i>
ACC 302-303 Intermediate Accounting I & II	6
BUS 402-403 Business Law II & III	6
EC 351 Labor Economics	3
FIN 351 Principles of Insurance	3
or	
FIN 401 Investment Management	3
FIN 303 Case Problems in Finance	3
FIN 431 Real Estate	4
MGT 412 Management-Union Relations	3
An advanced course in marketing	3
	<hr/> 31

And, in addition, the pre-law student should take PS 11-12-13 or 21-22-23 as his outside social science in the common curriculum.

Non-professional electives must include a minimum of 12 hours of advanced courses in Classics, History, Foreign Languages, Music History and Literature, Philosophy, Psychology, Sociology, Anthropology, Religion, Political Science, ENG 321-323 (8), and SPC 135 (3).

The remaining six hours may be taken in either professional or non-professional electives. Suggested additional professional electives include: EC 352 Labor Legislation, ACC 331-332 Income Tax Accounting, FIN 462 Estates, Wills and Trusts, and MKT 411 Credit Marketing.

Business Science

There is a growing demand for business administrators in the field of science and scientific research. Sales opportunities for pharmaceutical and chemical firms require not only a sense of business administration, but a good basic knowledge in the science area. To accomplish a major in this area a minimum of 30 hours must be taken in the departments of Biology, Chemistry, Physics, and Geology over and above the common curriculum requirement.

Students who desire a major in the Business Science curriculum should contact the Dean of Business Administration, who will assist the student in making out a completed program of prescribed study.

Technically Combined Curriculum

Any student desirous of combining a major in business administration with a major concentration in any other department of the University may do so by consulting with the Dean of Business Administration. Programs tailored to the individual student needs can be worked out to provide the base for many varied curriculums of professional study.

MANAGEMENT (MGT)

The student electing a major in management has five general areas of concentration to choose from. These are listed below together with their respective requirements.

Subjects Common to All Management Majors:

During the freshman year all management majors are encouraged to take PSY 11-12-13 (9 hours) as the social science elective.

During the junior-senior years the following courses are common to all management majors:

	<i>Hours</i>
MGT 303 Production Management	3
ACC 301 Managerial Accounting	3
PSY 321 Industrial Psychology	4
PSY 325 Social Psychology	4
PSY 331 Personality and Adjustment	4
	<u>18</u>

SUB-MAJORS:*General Management*

Advanced management courses	18
Professional electives	9-18
Non-professional electives	9-18
	<u>45</u>

Production Management

MGT 431 Intermediate Production Management	3
MGT 432 Production Control	3
MGT 433 Industrial and Institutional Purchasing	3
MGT 411 Supervisory Management	3
MGT 412 Management Union Relations	3
MGT 413 Design and Measurement of Work	3
Professional electives	9-18
Non-professional electives	9-18
	<u>45</u>

<i>Research and Development Management</i>		<i>Hours</i>
MGT 441 Management Planning	3	
MGT 442 Management Control	3	
MGT 543 Systems Management	3	
MGT 411 Supervisory Management	3	
MGT 412 Management Union Relations	3	
MGT 413 Design and Measurement of Work	3	
Professional electives	9-18	
Non-professional electives	9-18	
		<u>45</u>
<i>Personnel Management</i>		
MGT 401 The Personnel Function	3	
MGT 402 Compensation Administration	3	
MGT 403 Problems in Personnel Management	3	
MGT 411 Supervisory Management	3	
MGT 412 Management Union Relations	3	
Professional electives	12-21	
Non-professional electives	9-18	
		<u>45</u>
<i>Industrial Relations Management</i>		
MGT 401 The Personnel Function	3	
MGT 402 Compensation Administration	3	
MGT 412 Management Union Relations	3	
MGT 413 Design and Measurement of Work	3	
EC 454 Economics of Collective Bargaining	4	
Professional electives	12-21	
Non-professional electives	9-18	
		<u>45</u>



MARKETING (MKT)

To prepare the student majoring in marketing to enter his chosen field, the marketing curriculum is divided into two segments. The core courses will give an

overview of those areas which are needed for a well-developed basic marketing education. In addition the student will elect to concentrate in one of seven specific areas.

JUNIOR-SENIOR MARKETING CORE:

	<i>Hours</i>
MKT 303 Consumer Behavior	3
MKT 441 Advertising	3
MKT 451 Marketing Research	3
MKT 452 Analysis of Markets	3
MKT 492 Marketing Policies	3
PSY 321 Industrial Psychology	4
	<u>19</u>

SUB-MAJORS:

Physical Distribution Management

MKT 431 Distribution Logistics	3
MKT 471 Industrial Marketing	3
MKT 401 Sales Administration	3
MKT 411 Credit Management	3
MGT 433 Industrial and Institutional Purchasing	3
SPC 135-136 Essentials of Public Speaking I & II	6
Professional electives	9-18
Non-professional electives	9-18
	<u>42</u>

Sales Management

MKT 401 Sales Administration	3
MKT 431 Distribution Logistics	3
MKT 411 Credit Management	3
MKT 336 Salesmanship	3
EC 351 Labor Economics	4
SPC 135-136 Essentials of Public Speaking I & II	6
Professional electives	9-14
Non-professional electives	6-11
	<u>42</u>

Industrial Marketing

MKT 431 Distribution Logistics	3
MKT 471 Industrial Marketing	3
MKT 401 Sales Administration	3
MKT 411 Credit Management	3
MGT 433 Industrial and Institutional Purchasing	3
SPC 135-136 Essentials of Public Speaking I & II	6
Professional electives	9-12
Non-professional electives	9-12
	<u>42</u>

Retail Management

MKT 411 Credit Management	3
MKT 461 Retailing Principles	3
MKT 401 Sales Administration	3
MKT 336 Salesmanship	3
SPC 135-136 Essentials of Public Speaking I & II	6
Professional electives	9-18
Non-professional electives	9-18
	<u>42</u>

<i>International Marketing</i>		<i>Hours</i>
MKT 421 International Marketing		3
MKT 431 Distribution Logistics		3
MKT 471 Industrial Marketing		3
EC 441 International Economics I		4
EC 442 International Economics II		4
PS 321 International Law and Organization		3
Professional electives		9-16
Non-professional electives		9-16
		<u>42</u>
<i>Marketing Research and Advertising</i>		
MKT 421 International Marketing		3
MTH 228 Calculus		3
BUS 311 Introduction to Data Processing		3
PSY 331 Personality and Adjustment		4
PSY 325 Social Psychology		4
PSY 385 Quantitative Psychology		4
Professional electives		7-10
Non-professional electives		13-10
		<u>41</u>

THE MASTER OF BUSINESS ADMINISTRATION DEGREE

The Division of Business Administration offers a program of advanced study leading to the Master of Business Administration (M.B.A.) degree.

Curricular requirements for the M.B.A. degree give recognition to differences among candidates in educational background and experience. The program can be built upon undergraduate work in business, the arts, the sciences, engineering, or other fields of study. Each course of study is planned on an individual basis, taking into consideration the student's background, needs, and objectives. All candidates must have or must obtain a knowledge of fundamentals in the following seven areas: accounting, business finance, business law, economics, management, marketing, and statistics.

In addition to demonstrating a thorough knowledge of business administration, candidates must elect a major in accountancy, finance, management, or marketing.

They must obtain credit in administrative policy and decisions, behavioral theory, six quarter hours of quantitative methods, and six quarter hours of micro and macro economic theory. At least one graduate course in accountancy, finance, management, and marketing is strongly recommended.

Further degree requirements include 9-15 quarter hours of course work in the major department. An oral-comprehensive exam must be passed during the last quarter of the student's program. Forty-eight quarter hours of course work are required for the M.B.A. degree, with no thesis required.

If a student elects to write a thesis, forty-five quarter hours of course work are required. Three hours of credit shall be granted for the thesis and count as part of the 9-15 hours in the major area.

ADMISSION

Admission to the M.B.A. degree program requires application for admission to do graduate work and acceptance based upon the successful completion of a

baccalaureate degree with evidence of ability to do graduate work. Evidence of this ability may be displayed by:

1. An overall undergraduate grade point average of 2.7 (based on a 4.0 grading system).
2. An overall undergraduate grade point average of 2.5 but with 3.0 or better in the latter half of undergraduate work.
3. An overall undergraduate grade point average of 2.5 but with a 3.0 or better in major field.
4. Satisfactory score on Admission Test for Graduate Study in Business.

Admission may be made on other than regular status subject to rules set forth by the Graduate Division of Wright State University (See Division of Graduate Studies for probationary and special status).

Applications for admission and for the test are available in the office of the Dean of the Division of Business Administration.

Prerequisites: Some students may have already achieved graduate or undergraduate equivalents in the seven core areas (accounting, business law, economics, finance, management, marketing, and statistics). However, other students may have background deficiencies for the M.B.A. program. The following prerequisites are requirements of all students.

		<i>Hours</i>
Accounting:	Accountancy 201, 202, 203	6-9
	or Accountancy 621-622	
Business Law:	Business 401 or Business 611	3
Economics:	Economics 11-12-13 or Economics 621-622	6-9
Finance:	Finance 301-302 or Finance 621	3-6
Management:	Management 301-302 or Management 621	3-6
Marketing:	Marketing 301-302 or Marketing 621	3-6
Statistics:	Business 301-302 or Business 621	3-6
		<hr/> 27-45

Summary of Program: The following represents the basic course requirements leading to the M.B.A. degree without the thesis:

		<i>Hours</i>
Advanced Economics—Micro and Macro Theory	EC 517-515	6
Administrative Policy and Decisions	BUS 631	3
Behavioral Theory	BUS 511	3
Quantitative Methodology	BUS 623-624	6
Major		9-15
At least one <i>Graduate</i> course in Accounting, Finance, Management, and Marketing is strongly recommended		6-9
Electives (non-business and non-economics courses at the Graduate level may be taken as electives)		6-15
		<hr/> 48

find the stuff of writing you don't have to be
hemian and travel to exotic lands, or live the
the emotions of high tragedy, low comedy
middle-level boredom. Wherever there is
wing together, working, succeeding,
dreaming dream there is a river of



THE DIVISION OF EDUCATION

Wright State University recognizes teacher education as one of its primary functions. The Division of Education is responsible for designing and administering programs for the preparation of teachers and specialized school personnel, for contributing to educational research, and for providing service to the schools of the area.

The Division of Education meets the certification standards of the Ohio State Board of Education and is a member of the American Association of Colleges for Teacher Education.

REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN EDUCATION DEGREE

For graduation with the Bachelor of Science in Education degree with certification in *elementary education*, the minimum requirement is 192 credit hours (may include three hours of college service physical education), 60 of which are in the common curriculum, and a cumulative grade point average of 2.0. Of the 192 hours, a minimum of 42 credit hours of professional education and 135 credit hours of general education is required for the degree and for Ohio certification in elementary education.

For graduation with the Bachelor of Science in Education degree with certification in *secondary education*, the minimum requirement is 192 credit hours (may include six hours of college service physical education). All programs include 60 hours in the common curriculum, fulfillment of the requirements established in a major teaching field, and the completion of the professional education sequence. A cumulative grade point average of at least 2.0 with a minimum of 2.25 in each teaching field is required.

Note 1. All courses listed as Education are considered professional education except ED 201, 241, 242, 243 and 416.

Note 2. The minimum program requirements for a student entering the Division of Education prior to the current academic year will not be increased over the requirements described in the official bulletin of Wright State University for the entering year, provided the program is completed within a five-year period. Programs not completed within the five-year period are subject to review by the Division of Education and may require additional work.

ADMISSION AND RETENTION STANDARDS

Admission to the Division of Education is on the same basis as admission to other divisions of the University. A degree and certificate, however, are recommended not simply for compliance with regulations; rather, the faculty of the Division of Education bases its recommendations on consideration of character, ability, growth, and professional promise, as well as upon the completion of the required number of hours and subjects in a given program.

PROFESSIONAL LABORATORY EXPERIENCES

Students will be expected to engage in some form of approved work with children at the time they are enrolled in the professional education courses taken prior to student teaching. These experiences are prerequisite for student teaching.

Student teaching (ED 419 or 429) is a period of guided teaching during which the student, under the direction of a qualified cooperating teacher, takes increasing responsibility for leading the school experiences of a given group of learners full-time for a quarter. The student also engages more or less directly in many of the activities which constitute the wide range of a teacher's assigned responsibilities.

CURRICULA—BACHELOR OF SCIENCE IN EDUCATION DEGREE

The following are typical programs leading to certification in elementary fields and a Bachelor of Science in Education degree:

FOUR-YEAR ELEMENTARY CURRICULUM

<i>Freshman Year</i>	<i>Hours</i>	<i>Sophomore Year</i>	<i>Hours</i>
BIO 11-12-13 (cc) or ED 241, 242, 243 (cc)	12	ED 241, 242, 243 (cc) or BIO 11-12-13 (cc)	12
ENG 11-12-13 (cc)	9	GEO 11-12-13 (cc)	9
PSY 11-12 (cc)	6	ED 202, 203 (cc)	6
MTH 141, 142	8	HST 21-22-23 (cc)	9
MUS 165	3	AED 231	4
HST 11-12-13 (cc) or PS 11-12-13 (cc)	9	MUS 265	3
Elective	3	ENG 160	4
	<u>50</u>	PED 281	3
			<u>50</u>
<i>Junior Year</i>		<i>Senior Year</i>	
ED 315*, 316*, 317*	9	ED 417	4
AED 331	4	ED 419	12-15
ED 318*	3	ED 422	3
SPC 125, 126	6	ED 440	4
MUS 327	3	ED 403	4
A social science elective	3-6	Electives	16-19
BIO 301	5		<u>46</u>
Electives	10-13		
	<u>46</u>		

*Participation experience expected.

FOUR-YEAR ELEMENTARY AND SLOW LEARNER EDUCATION CURRICULUM

<i>Freshman Year</i>	<i>Hours</i>	<i>Sophomore Year</i>	<i>Hours</i>
BIO 11-12-13 (cc) or ED 241, 242, 243 (cc)	12	ED 241, 242, 243 (cc) or BIO 11-12-13 (cc)	12
ENG 11-12-13 (cc)	9	GEO 11-12-13 (cc)	9
PSY 11-12 (cc)	6	ED 202, 203 (cc)	6
MTH 141, 142	8	HST 21-22-23	9
MUS 165	3	AED 231	4
HST 11-12-13 (cc) or PS 11-12-13 (cc)	9	MUS 265	3
Elective	3	ENG 160	4
	<u>50</u>	PED 281	3
		ED 318*	3
			<u>50</u>

<i>Junior Year</i>		<i>Senior Year</i>	
ED 315*, 316*, 317*	9	ED 419	12-15
AED 331	4	ED 422	3
SPC 125, 126	6	ED 403	4
MUS 327	3	ED 440	4
A social science	3-6	ED 442*	4
BIO 301	5	ED 443*	4
PSY 433	4	ED 445	4
ED 441	4	Electives	8-11
Electives	<u>5-8</u>		<u>46</u>
	<u>46</u>		

*Participation experience expected.

SLOW LEARNER EDUCATION CURRICULUM

<i>Freshman Year</i>		<i>Sophomore Year</i>	
BIO 11-12-13 (cc) or ED 241, 242, 243 (cc)	12	ED 241, 242, 243 (cc) or BIO 11-12-13 (cc)	12
ENG 11-12-13 (cc)	9	GEO 11-12-13 (cc)	9
PSY 11-12 (cc)	6	ED 202, 203 (cc)	6
MTH 141, 142	8	HST 21-22-23 (cc)	9
MUS 165	3	AED 231	4
HST 11-12-13 (cc) or PS 11-12-13 (cc)	9	MUS 265	3
Elective	3	ENG 160	4
	<u>50</u>	PED 281	3
			<u>50</u>

<i>Junior Year</i>		<i>Senior Year</i>	
AED 331	4	ED 419	12-15
SPC 125, 126	6	ED 422	3
MUS 327	3	ED 403	4
A social science	3-6	ED 440	4
BIO 301	5	ED 444*	4
PSY 433	4	ED 445	4
ED 441	4	Electives	12-15
ED 442*	4		<u>46</u>
ED 443*	4		
Electives	<u>6-9</u>		
	<u>46</u>		

*Participation experience expected.



SECONDARY EDUCATION

Curricula in secondary education prepare students to teach the academic subjects in grades seven through twelve. Completion of the requirements outlined hereafter, and the recommendation of the Division of Education entitles one to the Bachelor of Science in Education degree and meets the requirements for an Ohio four-year provisional certificate in the areas of concentration.

All students in secondary education curricula must have an academic major and must fulfill the requirements of that major. A student may have a major and one or more second or supporting fields; two majors; or a comprehensive field. If a student has taken the curriculum and materials course in his major field, he is not required to take a comparable course in his other fields although he may do so. If the two fields are unrelated, a second curriculum and materials course is recommended.

There are 22 areas or combinations of areas from which a student may select a major or supporting field of specialization. Because of the large number of choices, only a general course pattern is presented here. Details must be worked out with, and approved by, an adviser.



GENERAL CURRICULUM PATTERN FOR SECONDARY PROGRAMS

	1st Quarter	2nd Quarter	3rd Quarter
<i>Freshman Year</i>			
ENG 11-12-13 Composition and Lit (cc)	3	3	3
PSY 11-12 (cc)	3	3	-
A biological science (cc) or a physical science (cc)	4	4	4
A social science (cc)	3	3	3
Electives (major or supporting field)	3	3	6
	<u>16</u>	<u>16</u>	<u>16</u>
<i>Sophomore Year</i>			
A humanities course (cc)	3	3	3
A physical science (cc) or a biological science (cc)	4	4	4
ED 202, 203 (cc)	-	3	3
SPC 135-136 Essentials of Public Speaking	3	3	-
Elective (major)	6	3	6
	<u>16</u>	<u>16</u>	<u>16</u>
<i>Junior Year</i>			
Education (Curriculum and Materials) *		3-7	
Electives (major)	10	10	9
Electives (supporting field)	6	0-3	7-8
	<u>16</u>	<u>16-17</u>	<u>16-17</u>
*Classroom participation expected when enrolled in these courses.			
<i>Senior Year</i>			
ED 422 Educational Organization	3	-	-
ED 429 Supervised Teaching	15	-	-
ED 464 Evaluation	-	4	-
ED 440 Senior Seminar in Education	-	-	4
Electives (major)	-	6	4
Electives (advised)	-	6	8
	<u>18</u>	<u>16</u>	<u>16</u>

(For a specialization requiring a three-year or a four-year sequence, such as language, mathematics, or science, some courses in the common curriculum must be taken in junior or senior years.)

(In many areas of specialization, the student may use requirements of the major or minor to satisfy common curriculum requirements. For example: a science major may use CHM 111-112-113 or PHY 140-141-142 for the physical science requirement. Common curriculum courses should, therefore, be chosen carefully with the help of an adviser.)

SECONDARY AND SPECIAL FIELDS MAJORS AND MINORS

The following list of teaching fields available to students in secondary curricula are accompanied by three columns of figures. The column at the left states the number of credit hours recommended by the Division of Education, the center column states the number that are required for a major, and the column at the right states the minimum requirements for a second teaching field.

The Division of Education considers the minimum requirements inadequate for effective teaching except on an emergency basis unless they are supported by a closely related field. It is advisable, therefore, that a student choose closely related supporting fields or plan to take more than the minimum work in the second field.

	<i>Cr. hrs. Recomm'd for one major</i>	<i>Cr. hrs. req'd for major</i>	<i>Cr. hrs. for 2nd or supporting field: see note</i>
Art Education	89c	81	40c
Biological Science			25f
Business Education	68	68	7-38d
Earth Science			29f
English	64	55	39
History and Political Science			42f
Latin			27f
Library Science			24f
Mathematics	56	50	29
Modern Foreign Language	56	42	30e
Music Education (See requirements for Bachelor of Music degree)			
Physical Science			36f
Physics			23f
Science Comprehensive:			
With concentration in Biology	102a	102a	
With concentration in Chemistry	107a	95a	
With concentration in Physics	101a	101a	
With concentration in Earth Science	104a	95a	
Social Studies Comprehensive	90	81	
Speech	60b	36	27

NOTE: The letters appearing after some of the credit hour numbers in the columns above have the following meanings:

- a. Including mathematics
- b. May take English or Speech curriculum and materials course
- c. Includes methods course
- d. Depending on subject area
- e. Beyond two years in high school or beginning six credit hours
- f. Second field only.

PROFESSIONAL SEQUENCE

	<i>Hours</i>
ED 202 and 203 Introductory Educational Psychology (Prerequisite: ED 201 or General Psychology)	6
ED (Curriculum and Materials in Areas of Specialization)	3 to 7
ED 422 School Organization	3
ED 429 Supervised Teaching	12-15
ED 464 Evaluation	4
ED 440 Senior Seminar in Education	4
	32-36

NOTE: At the beginning of the junior year, students from other divisions seeking certification should make application for admission to the teacher certification program. This may be accomplished through the record analysts in the Division of Education.

FIELDS OF CONCENTRATION—Details of Requirements.

*Art Education Major**—81 credit hours required, 89 credit hours recommended. Nine hours art history or equivalent; Art 101-102-103; 221-222, 224 and 226; AED 111-112, 114, 223, 330, 431, 332, 432 and Art Education electives totaling 16 credit hours. Recommended electives: AED 420, 421, 422, 423, 424, 425, 426, 427, 412, 441, 428, 411, and ART 321, 322.

Art Education as a second field—40 credit hours required.

ART 102, 221, 226; six hours art history; AED 111, 223, 332, 431, 330 and an art education elective of four credit hours.

*The Art Education major program prepares students to teach and supervise art in the elementary and secondary schools.

Biological Science as a second teaching field—25 credit hours required. (See comprehensive science for major.)

BIO 11-12-13; BIO 210, 211, 212, 213, 214.

Business Education—68 credit hours required. The comprehensive major (outlined below) leads to state certification in all areas of secondary business education. These areas include shorthand, typewriting, bookkeeping, general business, business law, economics, salesmanship, and other commonly taught business education subjects.

Comprehensive Majors

ACC 201, 202, 203, 103; BUS 101, 102, 401; EC 11, 12, 13; ENG 331; MTH 102 or 128; MKT 301, 336, plus 441 or 461; OA 201, 202, 212, 213, 301, 305, 405, 411.

Suggested Electives: ACC 302, 303; BUS 301, 311, 402, 403; FIN 103, 301, 351; GEO 225, 226; MGT 301; MKT 302, 303; OA 302, 401, 402.

Basic Business Education Major: Instead of the comprehensive major, a student may major in basic business education. The basic business education major does not include stenography. It includes the content in areas 2, 3, and 4 (detailed below) plus business electives for a minimum of 68 credit hours. The professional education courses relating to business education are also required.

1. Stenography-Typing (minimum of 30 credit hours) with the following required:

OA 201, 202, 212, 213, 301, 305, 405, 411; BUS 101, 102; ENG 331; ED 433, 434, 435; Electives from OA 302, 401, 402

2. Bookkeeping-Basic Business (minimum of 38 credit hours) with the following required:

ACC 201, 202, 203, 103; BUS 101, 102, 401; EC 11, 12, 13; MTH 102 or 128; ED 433, 436, 437; Electives from ACC 302, 303; BUS 311, 402, 403; FIN 103, 301, 351; GEO 225, 226.

3. Salesmanship-Merchandising (minimum of 30 credit hours) with the following required:

BUS 101, 102; MKT 301, 336, 461, 441; EC 11, 12, 13; ED 433, 438; Electives from MKT 302, 303.

4. Typewriting (minimum 7 credit hours) with the following required:

OA 212, 213; ED 433, 434.

Earth Science as a second teaching field—29 credit hours required. (See Science Comprehensive for major.)

GL 11-12-13; GL 203 and 311; GEO 11-12-13.

English—55 credit hours required; 64 credit hours recommended.

ENG 11-12-13; ENG 250-251; ENG 351 or 352; 353 or 354; 355 or 356; and one other course from 351 through 356 group; ENG 261; ENG 361-362; Three courses, each from a different category: 410, 420, 430, 440, 450, 460, 470, 480.

Students seeking secondary certification must have a minimum of eight credit hours in American literature and are strongly advised to take a course in Shakespeare.

Recommended: HST 321, 322, 323 or HST 371, 372, 373.

English as a second teaching field—39 credit hours required; 43 credit hours recommended.

ENG 11-12-13; ENG 250-251; ENG 351 or 352; 353 or 354; 355 or 356; and one other course from 351 through 356 group; ENG 361-362.

Recommended: ENG 261.

History-Political Science (second teaching field only)—42 credit hours required.

A basic course sequence in American history

A basic course sequence in American government

Advanced courses in World and American history

Advanced course in Political Science.

Latin (second teaching field only)—27 credit hours required.

Two years credit in high school Latin or the equivalent beginning college courses are prerequisite but not included in the required 27 credit hours.

LAT 201-202-203, 301, 302, 303, 481, 482 and 483.

Recommended electives: LI 471 and 472.

Library Science (second teaching field only)—24 credit hours required.

Library Science 321, 322, 421, 422, 431

ENG 160 or ED 449

Mathematics—50 credit hours required; 56 recommended.

*MTH 141, 142, 143; MTH 132, 133, 231, 232; MTH 280, 431, 355, 440, 455, 461 and 471; PHY 140, 141, 142.

Recommended electives: MTH 233, 456, 462.

*All or part of this sequence (141, 142, 143) may be waived for the well prepared student. Waiver is based upon a placement examination administered by the Mathematics Department.

Mathematics as a second teaching field—29 credit hours required. Mathematics courses through 232 and advised electives to complete a minimum of nine credit hours of applied mathematics.

Recommended electives: MTH 440 and 461.

Modern Foreign Language—42 credit hours in one language required; 56 recommended. Two years credit in high school language or the equivalent beginning college courses are prerequisite for the program but *not* included in the required 42 credit hours. In addition to course work, the candidate for certification in a modern foreign language is required to pass an oral proficiency examination.

French:

Fr 201, 202, 203, 241, 242, 243, 321, 322, 323, 341, 342, 343, 361, 301, 302, 303 and electives to complete the required or recommended credit hours.

Recommended electives: FR 431, 432, 433, 462, 463 and 464.

German:

GER 201, 202, 203, 321, 322, 323, 301, 302, 303, 341, 342, 343, 421, 422, 423 and electives to complete the required or recommended credit hours (any course in German except 351, 352 or 353).

Recommended electives: GER 401, 402, 403, 411, 412, and 413.

Spanish:

SPN 201, 202, 203, 301, 302, 303, 321, 322, 323, 341, 342, 343, 361 and electives to complete the required or recommended credit hours (any course in Spanish except 351, 352 or 353).

Recommended electives: SPN 331, 332, 333, 401, 402, 411, 412.

Modern Foreign Language as a second teaching field—a minimum of 30 credit hours including 18-21 hours in language command and 9-12 hours civilization and literature are required.

Music—(See Bachelor of Music degree requirements for major in Music Education.)

Physical Science as a second teaching field only—36 credit hours required.

CHM 111-112-113; PHY 140-141-142.

Electives: either CHM 211-212-213 or PHY 221, 222.

Physics as a second teaching field only—23 credit hours required.

PHY 140, 141, 142, 221, 222 and advised physics electives.

Science Comprehensive With:

Biology concentration—102 credit hours required.

BIO 11-12-13, 210, 211, 212, 213, 214, 215, 310, 311, 312, 313, 314, 315 and 414; CHM 111, 112, 113, 211, 212, and 213; PHY 11-12-13; GL 11-12-13.

At least two additional credit hours of electives in either mathematics or geology.

Chemistry concentration—95 credit hours required; 107 recommended.

CHM 111, 112, 113, 211, 212, 213, 312, 411, 412, 413, and 415; BIO 11-12-13, 210, 211, and 212; PHY 140, 141, 142.

Related fields for a minimum of 14 credit hours (mathematics and/or geology).

Earth Science concentration—95 credit hours required; 104 recommended.

GL 11-12-13, 203 or 301, 311, 430 and 431; GEO 11-12-13 and 332; BIO 11-12-13, 210, 211, and 212; CHM 111, 112, and 113; PHY 11-12-13 or 140-141-142.

In addition, advised electives to complete a 30 hour sequence are required in one of the following areas: biology, chemistry, or physics.

Recommended Earth Science electives: GL 201 and 434.

Physics concentration—101 credit hours required.

PHY 140-141-142, 211, 212, 221, 222, 230, 350, 351, 352 and Physics electives to complete the required credit hours; BIO 11-12-13, 210, 211, and 212; CHM 111, 112 and 113; MTH 132, 133, 231, 232, and 233. Recommended physics electives: PHY 50, 51, 52, 320, 321 and 442.

Social Studies Comprehensive—81 credit hours required; 90 recommended.

Basic Requirements: GEO 11-12-13; EC 11-12-13; HST 11-12-13; PS 11-12-13; HST 21-22-23; SOC 11-12-13 or 21-22-23.

Nine credit hours which include advanced courses in both U.S. history and non-U.S. history.

In addition, at least 18 elective hours in one of the following areas are required: economics, geography, government, history, sociology, or anthropology.

Speech and Theatre—36 credit hours required; 60 recommended.

SPC 135, 136; courses from each of the following areas:

SPC 111, 112, and 311; SPC 121, 125, 127, 128, and 221; SPC 101, 102, 201, 202, 301, 302, 401, and 402; and SPC 131, 232, 331, 332.

Speech as a second teaching field—27 credit hours required.

SPC 135, 136, and courses from each of the areas listed above.

REQUIREMENTS FOR A MASTER'S DEGREE IN ART EDUCATION

The following requirements pertain to both degrees available in Art Education: M.Ed. and M.A.

- I. Each Master's student in Art Education will be required to take the departmental diagnostic exam following his registration and acceptance in the Graduate School, but no later than the completion of his first four (4) credit hours of graduate work. The diagnostic examination covers various areas of proficiency in the general field of Art Education. A profile will be drawn up for each student after the examination has been scored to determine strengths and weaknesses in the field.
- II. Each graduate student enrolled in Art Education will be required to have an oral interview after the diagnostic exam has been completed and the results tabulated.
- III. This oral interview must be scheduled before no more than one (1) course has been completed.
- IV. The personnel conducting the oral interview will consist of the student's adviser and two or more members of the Department of Education.
- V. Each student must present a portfolio of his previous art work at the oral interview. This presentation may be in the form of the actual creative products, or colored slides of same, or both.
- VI. In addition to the above general requirements, specific requirements are:
 - A. Each M.Ed. candidate nearing the completion of his graduate study must present evidence of work at the master's level*, such as
 1. a written article appropriate for publication in a professional journal
 2. a paper which has been, or will be, read to a professional group
 3. an exhibit of graduate work (this exhibit may be a one-man show, or it may be a combined exhibit with other graduate students)
 - B. Each M.A. candidate must present a thesis, approved by his committee and pass a final degree examination covering the whole field of his graduate study, including the thesis.

*Whatever the candidate chooses to do of the above will require the approval by the student's committee (Note: committee is defined in point IV above.)

REQUIREMENTS FOR THE MASTER OF EDUCATION DEGREE:

- I. Required Courses:
 - Art Education 433 (4) or Art Education 434 (4)
Problems for the Elementary and Secondary School
 - Art Education 432 (4) The Adolescent and the Creative Process
 - Art Education 531 (4) Development of Art Education
 - Art Education 551 (4) Current Problems in Art Education
 - Art Education 552 (3) Research in Art Education
- II. Two courses will be chosen from the following:
 - Education 402 (4) History of Education
 - Education 502 (4) Social Foundations of Education
 - Education 503 (4) Philosophy of Education
 - Education 501 (4) Advanced Educational Psychology

III. The Art Education major must select one of three fields of concentration:

- 1) Art Teacher, General Course; 2) Art Teacher, Studio Concentration; 3) Art Supervisor. There may be certain additional requirements for each of these fields of concentration.

1. *Art Teacher, General Course:* This plan should be selected by the master's candidate who wishes to broaden his scope of studio experience. A minimum of 24 credit hours required in addition to the hours specified above. An 8 hour area of concentration is required.
2. *Art Teacher, Studio Concentration:* This plan should be selected by the master's candidate with extensive studio background who wishes to concentrate on depth experiences in studio areas. A minimum of 24 credit hours required in addition to the hours specified above. Two areas of studio concentration are required.
3. *Art Supervisor:* This plan should be selected by the master's candidate who wishes the supervision/administration area in Art's Education. A minimum of 24 credit hours required in addition to the hours specified above.

For students pursuing the Master of Arts program in Art Education, required courses include I (except Art Ed. 551) and II (one course required from list), and 3-9 hours thesis credit.

In addition to the required courses, the remaining hours are specified:

1. One field of studio concentration: 8 hours

2. A thesis subject must be accepted by the Department of Art Education before the student registers for thesis credit.

REQUIREMENTS FOR A MASTER'S DEGREE IN BUSINESS EDUCATION

The graduate student, with a declared major in Business Education, will take course work in three major areas:

BUSINESS EDUCATION

PROFESSIONAL EDUCATION

BUSINESS ADMINISTRATION

The proportions in these areas will be approximately one-third each (16 quarter hours). In the initial stages of this program, these proportions will be considered flexible.

Course selection in Business Education is considered an advising matter. Every effort is to be made to meet the student's personal objectives in the Master's degree program.

The required professional Education Courses in the Master's degree program include:

ED. 556—Introduction to Educational Research 3 quarter hours
Foundations, Two of the following:

ED. 501—Advanced Educational Psychology 4 quarter hours
ED. 502—Social Foundations of Education 4 quarter hours
ED. 503—Philosophy of Education 4 quarter hours
ED. 402—History of Education 4 quarter hours

Students may select from the following areas to fulfill the requirements in Business Administration: Accountancy, Business, Economics, Finance, Management, and Marketing.

REQUIREMENTS FOR A MASTER'S DEGREE IN CURRICULUM AND SUPERVISION

Required Courses:

ED. 449—Audio-Visual Materials and Methods	4 quarter hours
ED. 543—Supervision of Teaching	4 quarter hours
ED. 545—Curriculum Development in the Public School	4 quarter hours
ED. 552—Educational Statistics II	3 quarter hours
ED. 554—Research Design and Analysis	3 quarter hours

One of the Two Following:

ED. 512—Elementary School Curriculum	4 quarter hours
ED. 531—The High School Curriculum	4 quarter hours

Two Courses from the Following:

ED. 501—Advanced Educational Psychology	4 quarter hours
ED. 502—Social Foundations of Education	4 quarter hours
ED. 503—Philosophy of Education	4 quarter hours
ED. 402—History of Education	4 quarter hours

The student is expected to include in his program 3-6 quarter hours in related courses outside the Division of Education.

REQUIREMENTS FOR A MASTER'S DEGREE IN ELEMENTARY CLASSROOM

TEACHER

Required Courses:

ED. 556—Introduction to Educational Research	3 quarter hours
ED. 512—Elementary School Curriculum	4 quarter hours
ED. 610—Seminar in Elementary Education	3 quarter hours

Two Courses from the Following:

ED. 501—Advanced Educational Psychology	4 quarter hours
ED. 502—Social Foundations of Education	4 quarter hours
ED. 503—Philosophy of Education	4 quarter hours
ED. 402—History of Education	4 quarter hours

A minimum of 12 quarter hours should normally be taken outside the Division of Education.

REQUIREMENTS FOR A MASTER'S DEGREE IN SECONDARY CLASSROOM TEACHER

Required Courses:

ED. 556—Introduction to Educational Research	3 quarter hours
ED. 531—The High School Curriculum	4 quarter hours

OR

ED. 533—Improvement of Teaching in the Secondary School	4 quarter hours
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Two Courses from the Following:

ED. 501—Advanced Educational Psychology	4 quarter hours
ED. 502—Social Foundations of Education	4 quarter hours
ED. 503—Philosophy of Education	4 quarter hours
ED. 402—History of Education	4 quarter hours

At least 24 quarter hours must be taken outside the Division of Education. Such programs are individualized and must be established with the adviser.

REQUIREMENTS FOR A MASTER OF EDUCATION* IN COUNSELING AND GUIDANCE, OR A MASTER OF SCIENCE* IN PERSONNEL COUNSELING

General Requirements:

The *basic* requirements for both of these degrees are the same. Differences in preparation will be effected by: (1) individual focus within the courses in the required core, and (2) elective courses chosen according to individual interest and specific objectives.

The M.Ed. degree should be taken by those students with an undergraduate background in professional education, the M.S. degree by those without such background. The purpose of the M.S. with specialization in Personnel Counseling is to prepare individuals for counseling and guidance work in such fields as pastoral counseling; personnel service work in higher education, government, business or industry; or counseling positions in private or public service agencies.

Required Course Work:

A. Common Professional Courses:

ED. 552—Educational Statistics II, (pre-requisite ED. 551 or pass ED. 552 qualifying exam)	3 quarter hours
ED. 554—Research Design and Analysis	3 quarter hours
ED. 501—Advanced Educational Psychology	3 quarter hours
(ED. 502 may be substituted)	

B. Guidance Sequence:

ED. 461—Principles of Guidance	3 quarter hours
ED. 566**—Occupational and Educational Information	3 quarter hours
ED. 561—Psychometrics	3 quarter hours
ED. 563—Theories and Techniques of Counseling	3 quarter hours
ED. 567—Group Processes in Counseling and Guidance	3 quarter hours
ED. 664—Practicum in Counseling	3 quarter hours
ED. 665—Practicum in Counseling	3 quarter hours

C. Other:

1. At least one course should be selected from the guidance course offerings.
2. A strong concentration is recommended (9 quarter hours) in one or more of the following behavioral sciences: psychology, sociology, and anthropology.

*Requirements outlined are for students beginning their programs after the summer of 1968. Students in progress toward a degree before this time will work out a program with their advisers, taking into consideration both old and new requirements.

**This course is not specifically required for the M.S. degree. An additional course from C above may be substituted to meet individual needs.

REQUIREMENTS FOR A MASTER'S DEGREE IN ELEMENTARY SCHOOL PRINCIPAL

Required Courses:

ED. 512—Elementary School Curriculum	4 quarter hours
ED. 543—Supervision of Teaching	4 quarter hours
ED. 596—Organization and Administration of Public Schools	5 quarter hours
ED. 597—The Elementary School Principalship	3 quarter hours
ED. 552—Educational Statistics II	3 quarter hours
ED. 554—Research Design and Analysis	3 quarter hours

Two Courses from the Following:

ED. 501—Advanced Educational Psychology	4 quarter hours
ED. 502—Social Foundations of Education	4 quarter hours
ED. 503—Philosophy of Education	4 quarter hours
ED. 402—History of Education	4 quarter hours

The student is expected to include in his program 3-6 quarter hours in related courses outside the Division of Education.

REQUIREMENTS FOR A MASTER'S DEGREE IN SECONDARY SCHOOL PRINCIPAL

Required Courses:

ED. 461—Principles of Guidance	3 quarter hours
ED. 531—The High School Curriculum	4 quarter hours
ED. 543—Supervision of Teaching	4 quarter hours
ED. 596—Organization and Administration of Public Schools	5 quarter hours
ED. 598—The Secondary School Principalship	3 quarter hours
ED. 552—Educational Statistics II	3 quarter hours
ED. 554—Research and Analysis	3 quarter hours

Two Courses from the Following:

ED. 501—Advanced Educational Psychology	4 quarter hours
ED. 502—Social Foundations of Education	4 quarter hours
ED. 503—Philosophy of Education	4 quarter hours
ED. 402—History of Education	4 quarter hours

The student is expected to include in his program 3-6 quarter hours in related courses outside the Division of Education.

The Master of Arts (M.A.) in education may also be obtained in any of the above areas. This is a thesis degree consisting of 45 quarter hours including up to 9 quarter hours for the thesis.*

Each matriculating graduate student will be assigned an adviser from his major area. The student is required to consult with his adviser and plan his own program of study.

FINAL EXAMINATION: (Requirements for those entering Fall 1969)

For students in the M.A. programs, the oral defense of the thesis constitutes the major emphasis of the final exam. The examining committee will consist of three (3) members of the graduate faculty selected by the student's adviser.

For students writing a research project, the oral defense of the project constitutes the major emphasis of the final exam. The examining committee will consist of two (2) or three (3) members of the graduate faculty selected by the student's adviser.

All other students will be required to take a written examination on the major area of study. The exam will last a maximum of 3 hours, and will test the student's ability to apply principles, to analyze, synthesize, and evaluate. It is recommended that the student remain current with the literature in his major area.

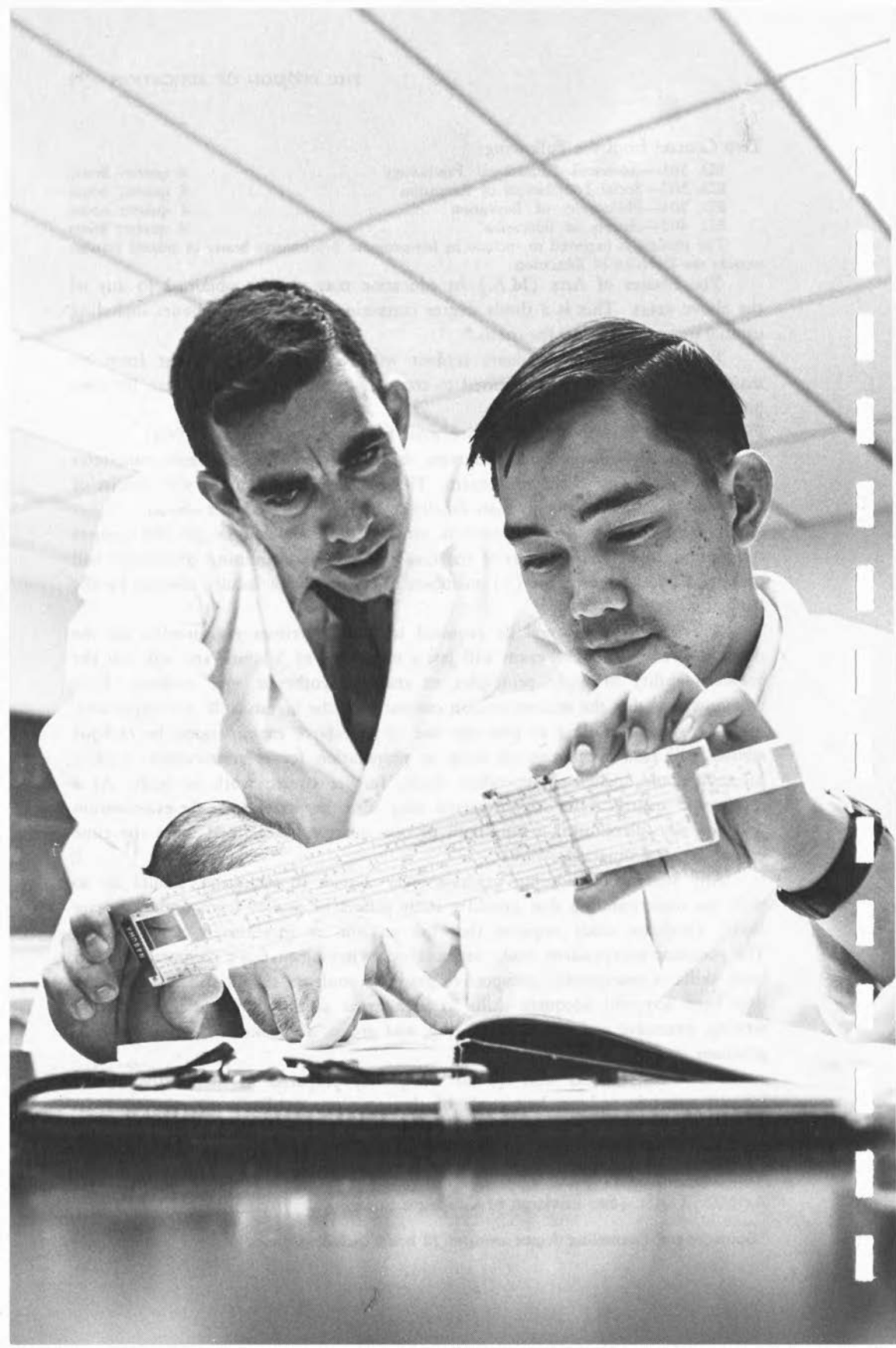
For students failing to pass any one of the above examinations, he and his adviser will plan a program of study in preparation for re-examination. Such a program could include independent study, further course work or both. As a result, the quarter hour requirements may also be extended. Re-examination will not take place until a minimum of one quarter has elapsed from the time of the last examination.

Any student considering graduate-level courses in education should do so with the understanding that graduate study differs in *quality* from undergraduate study. Graduate study requires that the student be increasingly self-directing. The resultant independent study depends upon having at one's command certain basic skills. Consequently, prospective graduate students should consider whether they have acquired adequate skills in such areas as library research, expository writing, extensive and intensive reading, and group discussion *before* attempting graduate study.

For those students who are not adequately prepared in such skills, a few months spent in independent study of them, or one academic quarter spent in undergraduate courses in which such skills are developed, will greatly enhance the probability of success in graduate study. It should be noted, however, that attending and completing courses is not a guarantee of a Master's degree.

ADMISSIONS: (See Division of Graduate Studies)

*Guidance and Counseling degree requires 50 hours including thesis.



THE DIVISION OF SCIENCE AND ENGINEERING

The Division of Science and Engineering offers curricula in biology (including medical technology), chemistry, engineering, geology, mathematics, physics, and psychology. The Bachelor of Science degree may be obtained in most curricula as well as the Bachelor of Arts degree. The Master of Science degree is available in biology, chemistry, engineering, geology, and mathematics. Degrees also may be obtained in computer science and engineering physics by enrolling in interdisciplinary programs given by the Engineering, Mathematics, and Physics Departments. The individual department should be consulted when planning the degree program.

REQUIREMENTS FOR BACHELOR OF SCIENCE DEGREE

To be eligible for the Bachelor of Science degree a student must have:

1. Fulfilled the 60 hours of the common curriculum and other requirements which the University shall impose.
2. Completed the residency requirement of 45 hours at Wright State. At least 15 of the last 45 hours taken for the degree must be in residence.
3. Completed at least 186 credit hours of acceptable academic work with at least a 2.0 cumulative average, and an average of at least 2.0 in the major field. A student may find it necessary to earn more than 186 credit hours to complete the requirements of the curriculum under which he seeks to graduate.
4. Completed at least 69 advanced credit hours (courses numbered 200 and above) applicable to the degree.
5. Completed at least 54 credit hours in one department; by permission of the chairman of the major department up to 18 credit hours of this requirement may be taken in a closely related field.
6. Completed the language requirement as determined by the major department.
7. Completed all the requirements in one of the approved programs of study set up by the departments.

NOTE: No more than 90 credit hours in any one department may be credited toward graduation.

BIOLOGY

The Biology Department offers an integrated comprehensive major. Both the Bachelor of Arts and Bachelor of Science degrees are offered. The general requirements are as follows:

DEPARTMENTAL UNIT. 49 hours in the Biology core program which includes BIO 11-12-13, 210, 211, 212, 213, 214, 215, 310, 311, 312, 313, 314, 315, 410 and 488. Additional courses may be selected in consultation with the departmental adviser.

RELATED REQUIRED COURSES. Chemistry: CHM 111-112-113 or 11-12-13 and 109, 211-212-213, and 312.

Physics: 12-15 credit hours in physics, PHY 140-141-412 or 170-171-172-173 or 11-12-13,

Mathematics: 15 credit hours of calculus, MTH 132, 133, 231. Results of the mathematics placement examination will be used to determine the proper initial mathematics course (see mathematics course listings).

Foreign Language: 14 credit hours of a foreign language or completion of the second year language sequence. German, French, or Russian is recommended.



RECOMMENDED PROGRAM FOR
THE BACHELOR OF SCIENCE DEGREE IN BIOLOGY

Freshman Year

ENG 11-12-13 (cc)	9
CHM 111-112-113	15
BIO 11-12-13	12
Social Science (cc) or mathematics	9-11
	<u>45-47</u>

Sophomore Year

BIO 210, 211, 212, 213, 214, 215	15
CHM 211-212-213	15
Mathematics	9-16
Social Science (cc)	9
	<u>48-55</u>

(cc) denotes common curriculum courses.

Junior Year

BIO 310, 311, 312, 313, 314, 315	15
CHM 312	6
Mathematics or social science (cc)	5-9
Humanities (cc)	9
Foreign Language	12
	<u>47-51</u>

Senior Year

BIO 410	4
BIO Seminar 492	3
BIO Electives	8
Foreign Language	9
Physics	12-15
Electives	10
	<u>46-49</u>

To qualify for the Bachelor of Arts degree the student must fulfill the general requirements for the Bachelor of Arts degree as prescribed by the University.

MEDICAL TECHNOLOGY

The degree program leading to a Bachelor of Science in Medical Technology is achieved by the satisfactory completion of three years study at Wright State University and a one year internship in a clinical laboratory approved by the American Society of Clinical Pathologists, the Board of Schools of Medical Technology of the Council of Medical Education of the American Medical Association. Affiliated intern programs are available at Kettering Memorial Hospital, Miami Valley Hospital, Springfield Community Hospital, and Saint Elizabeth Hospital. Internship programs in other ASCP approved laboratories are available with departmental consent.

To qualify for the degree Bachelor of Science in Medical Technology, students must complete the general requirements for the Bachelor of Science degree as prescribed by the Division of Science and Engineering and an approved medical technology internship program. The internship program credits are applicable to the advanced credit and total credit requirements of the Division. Students are eligible to apply for admission to an internship program after completion of the prescribed program of study at Wright State. Acceptance into an internship program is determined by the affiliated school of medical technology.

DEPARTMENTAL REQUIREMENTS

Biology: BIO 11-12-13, 210, 211, 212, 213, 214, 215, 310, 311, 312, 313, and 426.

Chemistry: CHM 111-112-113 or 11-12-13 and 109, 211-212-213, and 312.

Physics: PHY 11-12-13.

Mathematics: Three quarters of mathematics. Results of the mathematics placement examination will be used to determine the proper initial mathematics course (see mathematics course listings).

RECOMMENDED PROGRAM FOR THE BACHELOR OF SCIENCE IN MEDICAL TECHNOLOGY

Freshman Year

ENG 11-12-13 (cc)	9
CHM 111-112-113	15
BIO 11-12-13	12
Social Science (cc) or mathematics	9-12
	<u>45-48</u>

Junior Year

BIO 310, 311, 312, 313	10
BIO 426	4
CHM 312	6
PHY 11-12-13	12
Humanities or social science (cc)	9
Electives	5
	<u>46</u>

Sophomore Year

BIO 210, 211, 212, 213, 214, 215	15
CHM 211-212-213	15
Social Science (cc) or mathematics	15-18
	<u>45-48</u>

Senior Year

Hospital Internship Program	48-52
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GRADUATE PROGRAM

GENERAL REQUIREMENTS FOR ADMISSION: To be admitted to graduate study in biology a candidate must:

1. Satisfy the requirements of the Division of Graduate Studies, as outlined on page 123.

2. Have a Bachelor of Arts or Bachelor of Science degree with an overall undergraduate grade point average of 2.7 or better on a 4.0 point grading system. Training in calculus, physics, and organic chemistry is strongly advised. In special cases a candidate may be admitted on a probationary status if his grade point average is below 2.7. Probationary status will be granted only after approval by the Graduate Committee of the Department of Biology. Probationary status may be granted upon a favorable committee recommendation based upon the candidate's performance in the Graduate Record Examination, letters of recommendation and, wherever possible, a personal interview.

Usually the student will take an advisory examination approximately two weeks before registration for the first quarter. The purpose of the advisory examination is to acquaint the student and the Department of Biology with possible areas of weakness and aid in the preparation of a program of studies.

BASIC MASTER OF SCIENCE DEGREE REQUIREMENTS: The following requirements will be met by students who are candidates for the Master of Science degree in biology:

1. Completion of a minimum of 45 quarter hours. At least 30 quarter hours will be at the 500-600 level in biology and related areas. A maximum of 10 hours of graduate courses may be transferred. The candidate will participate each quarter in the graduate seminar in the department.

2. Registration for three consecutive quarters in his final academic year.

3. Maintenance of a 3.0 cumulative average with no more than nine hours of C grades able to be applied to the degree.

4. Submission and oral defense of a thesis based upon original research. In special cases, a problem of bibliographical character may be accepted depending upon the objectives of the student. Such action will require approval by the Biology Graduate Committee.

5. Passing of a comprehensive examination. This examination will be taken normally at the end of two years of academic work. Exceptionally well-prepared students may elect to be examined after their first year.

6. Assisting in a teaching capacity for a minimum of one quarter.

7. Satisfying of the recommendations for language proficiency made by his Advisory Committee.



CHEMISTRY

The Department of Chemistry offers programs at both the undergraduate and graduate levels. Students majoring in chemistry, as undergraduates, may qualify for either the Bachelor of Arts or Bachelor of Science degree. At the graduate level a Master of Science degree is available to qualified applicants.

The Bachelor of Arts and Bachelor of Science degree programs are designed to prepare the undergraduate student for industry, graduate work, or entrance into professional school. In order to develop an academic program to suit specific needs, students should consult with their curriculum adviser.

To qualify for the Bachelor of Science degree with a major in chemistry, students should complete the chemistry, mathematics, and physics courses which are included in the suggested program outlined below. Chemical Literature (CHM 319) is strongly recommended but not required. There is no foreign language requirement; however, two years of study in German, French, or Russian, or one year of any two of these languages, are strongly recommended. Mathematics 232 which completes the four-part calculus sequence is recommended because of its utility in Physical and Inorganic Chemistry courses. Students must fulfill the general requirements for the Bachelor of Science degree as prescribed by the Division of Science and Engineering.

First Year

CHM 111, 112, 113	15
MTH 132, 133, 231	15
ENG 11, 12, 13 (cc)	9
BIO 11, 12, 13 (cc)	12
	<u>51</u>

Second Year

CHM 211, 212, 213	15
PHY 140, 141, 142	15

Option A

Social Science (cc)	9
Humanities (cc)	9
	<u>(A) 48</u>

Option B

Mathematics	10
Electives	3
	<u>(B) 43</u>

Third Year

CHM 311, 312, 313	18
CHM 411, 412, 413	9
Social Science (cc)	9
Foreign Language	12
CHM 319	1
	<u>49</u>

Fourth Year

CHM 420, 421	6
CHM 415	2
Foreign Language	9

Option A

Electives	21
	<u>(A) 38</u>

Option B

Social Science (cc)	9
Humanities	9
Electives	8
	<u>(B) 43</u>

(cc) denotes common curriculum courses.

To qualify for the Bachelor of Arts degree, the student may omit CHM 311, 313, 420 and 421 and PHY 11, 12, 13 may replace PHY 140, 141, 142. Two years of any foreign language are required. In addition students should fulfill the general requirements for the Bachelor of Arts degree as prescribed by the University.

GRADUATE PROGRAM

A candidate for the Master of Science degree in chemistry must meet the standard degree requirements as outlined by the Division of Graduate Studies elsewhere in this bulletin. In addition, the candidate will select approximately 30 quarter hours of courses in chemistry and related fields with the aid of his advisory committee. To assist in the proper placement of each candidate in the program a series of preregistration examinations is given each candidate approximately two weeks before the first quarter of registration. These examinations are to evaluate the student's preparation in inorganic, organic, analytical, and physical chemistry and are used by the committee in aiding the student in preparing his program of studies.

The chemistry courses must be numbered 500 or above; the related courses must be acceptable to the Department of Chemistry. Thesis work will require at least 15 additional credit hours. In determining the student's program, the advisory committee may require the candidate to demonstrate his ability to read chemical papers in a foreign language. However, as a general rule, the department does not require a reading knowledge of a foreign language for the Master of Science degree.

Full-time residence for students pursuing the master's degree is not required. However, a student must be registered for three consecutive quarters of full or part-time study.

In addition to course work, the student must present an acceptable thesis on laboratory or theoretical research performed while enrolled as a graduate student at Wright State University. The thesis must be submitted in final written form, not later than six months after the close of the last quarter in which he was enrolled in the research course.

Four copies of the final draft of the thesis will be submitted to the committee and the departmental chairman for approval prior to binding (two copies will be deposited in the library archives, one copy is for the adviser, and the last copy is for the student).

After the presentation of the thesis and at least two weeks prior to the date proposed for conferring the degree, the candidate must pass a written or oral examination. Should the student's record be satisfactory, the scope of the examination will be generally confined to the candidate's field of specialization. The examination committee shall be chosen by the student's research adviser in consultation with the Chairman.

PREREQUISITES FOR GRADUATE WORK

The student must have had approximately 50 quarter hours (33 semester hours) of undergraduate work in chemistry. One year of physics and a preparation in mathematics through calculus is necessary. In the chemistry area, the applicant's preparation should include general chemistry, quantitative analysis, and introductory courses in organic, inorganic, and physical chemistry, including laboratory work in all subjects. Preparation in instrumental analysis is highly desirable although not formally required for admission to graduate studies.

ENGINEERING

The Department of Engineering offers programs leading to the Bachelor of Science degree in systems engineering, engineering physics, and computer sciences. The engineering physics program and the computer science program are interdisciplinary programs between the Departments of Engineering and Physics and the Departments of Engineering and Mathematics, respectively. The Department also offers a graduate program in systems engineering.

The systems engineering program consists of a core of engineering science, mathematics, and computer courses which serves as a foundation for the advanced work. The systems engineering program integrates subject matter from the classical engineering disciplines into a program concerned with the design and analysis of engineering systems. In the initial courses in linear systems, physical systems are modeled in order to determine the effect of various inputs on the behavior of the systems. Electrical, mechanical, fluid, and thermal systems are analyzed on a unified basis. Beyond the basic systems courses are advanced courses in control systems, communication theory, and energy conversion as well as other advanced courses. The techniques studied in the systems engineering program are applicable to a variety of other systems such as chemical systems, transportation systems, and economic systems.

The engineering physics program also contains a core of engineering science, mathematics, and computer courses. This is an interdisciplinary program which will give the student a strong theoretical background in physics along with the applied engineering courses. Normally a graduate of the engineering physics program will select a field of specialization in graduate school or in industrial practice.

The computer science program is discussed in detail under the section on Computer Science.

ENGINEERING PROGRAM—FRESHMAN AND SOPHOMORE YEARS

FRESHMAN

<i>Fall Quarter</i>	<i>Winter Quarter</i>	<i>Spring Quarter</i>
ENG 11 3	ENG 12 3	ENG 13 3
MTH 132* 5	MTH 133 5	MTH 231 5
CHM 106 3	CHM 107 3	CHM 108 3
EGR 141 3	EGR 142 3	EGR 143 3
Comm. curr. 3	Comm. curr. 3	Comm. curr. 3
<u>17</u>	<u>17</u>	<u>17</u>

SOPHOMORE

MTH 232 5	MTH 233 5	MTH 355 3
PHY 140 5	PHY 141 5	PHY 142 5
EGR 210 3	EGR 212 4	EGR 213** 5
Comm. curr. 3	Comm. curr. 3	Comm. curr. 3
<u>16</u>	<u>17</u>	<u>16</u>

*Students with poor backgrounds in algebra and trigonometry should enroll in MTH 130-131.

**Engineering physics majors substitute MTH 331.

ENGINEERING PROGRAMS—JUNIOR AND SENIOR YEARS

SYSTEMS ENGINEERING

JUNIOR

MTH 331	3	MTH 333	3	MTH 332	3
EGR 321	5	EGR 322	5	EGR 341	4
EGR 313	5	EGR 315	4	EGR 316	3
BIO 11	4	BIO 12	4	EGR 345	3
	<u>17</u>		<u>16</u>	BIO 13	4
					<u>17</u>

SENIOR

EGR 421	5	EGR 425	4	EGR 426	4
EGR 441	4	Technical elective	3	Technical elective	3
EGR 423	4	EGR 488	3	EGR 489	5
Comm. curr.	3	EGR 430	3	Comm. curr.	3
	<u>16</u>	Comm. curr.	3		<u>15</u>
			<u>16</u>		

ENGINEERING PHYSICS

JUNIOR

PHY 230	4	MTH 333	3	MTH 332	3
EGR 321	5	EGR 322	5	EGR 341	4
PHY 350	3	PHY 351	3	PHY 352	3
Comm. curr.	3	PHY 221	3	PHY 222	3
	<u>15</u>	Comm. curr.	3	Comm. curr.	3
			<u>17</u>		<u>16</u>

SENIOR

EGR 421	5	EGR 425	4	Technical elective	3-4
Technical elective	3-5	EGR 488	3	EGR 489	5
PHY 460	3	PHY 461	3	PHY 462	3
BIO 11	4	Technical elective	3-4	BIO 13	4
	<u>15-17</u>	BIO 12	4		<u>15-16</u>
			<u>17-18</u>		

Total minimum number of technical electives: 10 hours.

GEOLOGY

Candidates for a degree in geology may choose among three programs: Bachelor of Science or Bachelor of Arts in the Division of Science and Engineering, or Bachelor of Science in Education degree in earth science in the Division of Education. The curriculum below is for the Bachelor of Science degree in geology and is designed to prepare the student for a career as a professional geologist. Majors selecting this program would be well prepared to attend graduate school. This curriculum provides for the basic needs in geology and allied fields and by use of supporting electives prepares the undergraduate for his particular choice of specialization in graduate school or industry.

Variations in students' background (as in mathematics) may require considerable changes in the program. Specific details of the individual program should be discussed with the adviser.

SUGGESTED CURRICULUM FOR GEOLOGY MAJOR

Freshman Year

CHM 111-112-113	12
GL 11-12-13	12
ENG 11-12-13 (cc)	9
Mathematics*	15
	<hr/> 48

Sophomore Year

BIO 11-12-13 (cc)	12
GL 430-431	6
GL 301	5
Social science (cc)	9
Supporting elective	4
	<hr/> 45

Junior Year

Supporting elective	8
GL 311, 411, 433	13
PHY 140-141-142	15
Foreign language	12
	<hr/> 48

Senior Year

GL 412	5
Geology electives	12
Social science (cc)	9
Foreign language	9
Humanities (cc)	9
Supporting electives	4
	<hr/> 48

*Mathematics through MTH 133 is required for the Bachelor of Science degree. (cc) denotes common curriculum courses.

JUNIOR OR SENIOR YEAR, SUMMER TERM

GL 434 or equivalent	6
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For the Bachelor of Arts degree in geology, MTH 132 is required. PHY 11, 12, 13 may be substituted for PHY 140, 141, 142, and GL 411-412 is not required. At least 20 hours of electives number 200 or above must be taken to fulfill the hours of advanced courses required for the Bachelor of Arts degree. A summer field course is recommended as an elective.

Those electing the Bachelor of Arts degree program should consult their adviser concerning a specific curriculum and must realize that this program is minimal for a professional career and graduate school attendance.

The earth science curriculum qualifies the candidate for teaching in secondary schools in both earth science and another science of the student's choice. The student's adviser should be consulted for a specific program.

MATHEMATICS

The Department of Mathematics offers programs at both the undergraduate and graduate levels. Both Bachelor of Arts and Bachelor of Science degrees are available to the undergraduate, and the Master of Science is available at the graduate level. For the Bachelor's degree, the student has two options, the regular program and the computing option. For secondary education see Education section.

MATHEMATICS: REGULAR PROGRAM

A mathematics major in the regular program must take a minimum of 60 credit hours of courses in mathematics. These courses must be chosen from among the three groups listed below. These groups consist of (1) required courses; (2) recommended courses; and (3) elective courses. A course in computer programming is also recommended. This course may be taken in either the Mathematics Department or Engineering Department. PHY 140-141-142 is also recommended. Either the Bachelor of Arts or the Bachelor of Science degree requirements may be fulfilled by the mathematics major.

1. Required mathematics courses: MTH 132, 133, 231, 232, 233, (or 135, 136, 137, 235, 236, 237, 238, 239) 331, 355, 356, 431, 432, 455.

2. Recommended mathematics courses: MTH 280, 332, 433, 456.

3. Mathematics electives: MTH 310, 316, 317, 333, 457, 458, 461, 462, 463, 471, 472, 475, 411, 412, 413, 488, 492 or any 500 course. Also PHL. 323.

MTH, 310, 316, 317, 331, 332, 333, 355, 356, 401, 402, 403, 440 are offered for graduate credit to all graduate students *except* those seeking a master's degree in mathematics.

MTH 411, 412, 413, 457, 458, 431, 432, 433, 455, 456, 461, 462, 463, 471, 472, 475, 488, 492 are offered for graduate credit to all students.

Suggested program for the Bachelor of Science Degree in the regular program.

<i>Freshman Year</i>		<i>Junior Year</i>	
MTH 132, 133, 231	15	MTH 355, 356	6
English (cc)	9	MTH 455, 456	6
Biology (cc)	12	MTH 331, 332	6
Social science (cc)	9	Language	12
	<u>45</u>	EGR 210	3
		Elective	12-15
			<u>45-48</u>
<i>Sophomore Year</i>		<i>Senior Year</i>	
MTH 232, 233	10	MTH 431, 432, 433	9
MTH 280	3	Mathematics elective	12
PHY 140, 141, 142	15	Language	9
Humanities (cc)	9	Elective	14-20
Social science (cc)	9		<u>44-50</u>
Elective	0-3		
	<u>46-49</u>		

(cc) denotes common curriculum courses.

MATHEMATICS—COMPUTING OPTION

For the mathematics major who wishes to pursue the computing option, the required courses are:

MTH 132, 133, 231, 232, 233 (or 135, 136, 137, 235, 236, 237, 238, 239), 355, 411, 412, 413, 461 and 18 hours of courses selected from 316, 317, 431, 432, 433, 462, 463, 310, 457, 458.

Elective courses (mathematics and general) should be chosen in consultation with the major adviser to form a concentration in a field of computer application in which the student is interested (e.g. a science, economics, business, social science, etc.)

Suggested Program:

<i>Freshman Year</i>		<i>Sophomore Year</i>	
MTH 132, 133, 231	15	MTH 232, 233, 355	13
English (cc)	9	EGR 210, 211	6
Biology (cc)	12	Common Curric.*	21
Social Science (cc)	9	Electives †	6-9
	<u>45</u>		<u>46-49</u>
<i>Junior Year</i>		<i>Senior Year</i>	
MTH 310, 316, 317	9	MTH 411, 412, 413, 457,	
Common Curric.	9	431, 461, 462	24
Electives †	27-31	Electives †	21-25
	<u>45-49</u>		<u>45-49</u>

*Physics 140, 141, 142 for those interested in scientific applications of computing.

†See the above note concerning electives.

COMPUTER SCIENCE

The computer science curriculum is an interdisciplinary program offered jointly by the Departments of Mathematics and Engineering. This program leading to a Bachelor of Science degree in computer science contains a core of courses in computer programming and functional characteristics, applied mathematics, and systems engineering.

A student who completes this program is prepared for employment in the computer industry or in the various industries and organizations which utilize computers in problem analysis.

He is also prepared for graduate study in computer science, but to prepare for graduate study in mathematics or systems engineering he should take the additional courses listed following the computer science program.

COMPUTER SCIENCE PROGRAM

FALL QUARTER	WINTER QUARTER	SPRING QUARTER
<i>Freshman Year</i>		
ENG 11 3	ENG 12 3	ENG 13 3
MTH 132 5	MTH 133 5	MTH 231 5
Comm. curr. 3	Comm. curr. 3	Comm. curr. 3
BIO 11 4	BIO 12 4	BIO 13 4
<u>15</u>	<u>15</u>	<u>15</u>
<i>Sophomore Year</i>		
MTH 232 5	MTH 233 5	MTH 355 3
PHY 140 5	PHY 141 5	PHY 142 5
EGR 210 3	EGR 212 4	EGR 213 5
Comm. curr. 3	Comm. curr. 3	Comm. curr. 3
<u>16</u>	<u>17</u>	<u>16</u>
<i>Junior Year</i>		
MTH 331 3	MTH 333 3	MTH 332 3
EGR 321 5	EGR 322 5	EGR 341 4
EGR 211 or MTH 310 3	MTH 316 3	MTH 317 3
Comm. curr. 3	Comm. curr. 3	Comm. curr. 3
Tech. elective 3	Tech. elective 3	Tech. elective 3
<u>17</u>	<u>17</u>	<u>16</u>
<i>Senior Year</i>		
EGR 421 5	EGR 425 4	EGR 426 4
EGR 441 4	EGR 542 3	EGR 524 3
MTH 411 4	MTH 412 4	MTH 413 4
Elective 3	MTH elective 3	MTH elective 3
<u>16</u>	EGR 430 3	Elective 3
	<u>17</u>	<u>17</u>

Minimal additional courses recommended for graduate study in mathematics: MTH 356, 455, 456, 431, 432, 433.

Minimal additional course recommended for graduate study in systems engineering: EGR 313, 315, 316.

GRADUATE PROGRAM

Admission Requirements: Candidates for admission to graduate study in mathematics are expected to meet the general requirements for admission to graduate study as established by the Division of Graduate Studies. In addition a candidate should have completed a calculus sequence and several courses which have the calculus sequence as prerequisite. The types of courses "beyond" calculus which are considered most important are sequences in analysis (advanced calculus) and algebra (linear algebra and/or modern algebra).

Candidates with insufficient preparation in mathematics may be admitted on the condition that they complete certain prerequisite work defined by the Department of Mathematics at the time of admission. In general a student presenting fewer than 21 quarter hours of mathematics beyond calculus at the time of admission should expect to take at least two years to complete the degree program.

Requirements for a Master of Science Degree in Mathematics:

In addition to the standard requirements for the master's degree as outlined by the Division of Graduate Studies elsewhere in this bulletin, the degree in mathematics requires:

1. Completion of a minimum of 24 quarter hours in mathematics courses numbered 500 or above.
2. One of the sequences: MTH 531-532-533 or 551-552-553.
3. A thesis is optional. Students who elect to write a thesis may count the thesis for not more than 10 quarter hours credit. The thesis must be prepared to conform with standards established by the Division of Graduate Studies.

Typical Programs: The well-prepared student could complete a strong program in one year as follows:

<i>Fall</i>	<i>Winter</i>	<i>Spring</i>	<i>Summer</i>
531	532	533	Electives
551	552	553	Thesis
Elective	Elective	Electives	

The student who does not wish to attend during the summer could complete the same program, or a stronger one, by continuing for one or more quarters of a second year.

The less well-prepared student could complete a strong program in two years as follows:

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
1st Yr.	431	432	433
	Elective	455	456
	Elective	Elective	Elective
2nd Yr.	531	532	533
	551	552	553
	Elective	Elective	Elective

PHYSICS

The following program of courses has been outlined for the guidance of students planning to obtain a Bachelor of Science degree in physics:

<i>Freshman Year</i>		<i>Junior Year</i>	
PHY 140-141-142	15	PHY 350-351-352	9
PHY 50-51-52	3	PHY 320-421	6
MTH 132-133-231	15	PHY 310-311-312	5
ENG 11-12-13 (cc)	9	MTH 332-333	6
Social science (cc)	9	CHM 111-112-113	15
	<u>51</u>	Elective	<u>9</u>
			50
<i>Sophomore Year</i>		<i>Senior Year</i>	
PHY 230	4	PHY 460-461-462	9
PHY 221-222	6	PHY 442	3
PHY 211-212	2	PHY 494 or 499	6
MTH 232-233-331	13	Social science (cc)	9
BIO 11-12-13 (cc)	12	Humanities (cc)	9
Elective	12	Elective	15
	<u>49</u>		<u>51</u>

(cc) denotes common curriculum course.

The student planning to pursue graduate study is strongly urged to take further mathematics in the senior year as well as additional physics courses. Suggested electives include, among others, PHY 480-481-482; Mathematics; foreign language; EGR 210 and 341.

The student who is unable to begin the physics course in his freshman year should consult with the department for the alternate suggested schedule.

PSYCHOLOGY

The major programs in psychology provide an intensive introduction to the basic problems of the science, their historical development, and the important practical issues to which they are related. For especially able students, opportunity for individual study and experimental research in close association with a faculty member is provided.

Majors in psychology have the option of obtaining either Bachelor of Arts or Bachelor of Science degree.

For a major in psychology leading to a Bachelor of Arts degree, the student must fulfill all requirements of the common curriculum and the group requirements of the Division of Liberal Arts.

In addition, the psychology major must satisfy the following departmental requirements:

1. A minimum of 54 credit hours in psychology including:
 - (a) PSY 11, 12, 13; 211; and 212, 213.
 - (b) A 300-level course from three of the following five areas; PSY 321, 325; 331, 341; 361, 362; 371, 372, 375, 376; and 385.
 - (c) Twelve of the remaining credit hours may be taken in a closely related field with consent of the department.

2. Eight hours of science (other than psychology) beyond the common curriculum.
3. Eight hours of mathematics beyond the level attained on the mathematics placement test *or* satisfactory completion of college calculus.

For a major in psychology leading to the Bachelor of Science degree, the student must fulfill all requirements of the common curriculum and the Division of Science and Engineering, as well as the departmental requirements stated above. In addition the Bachelor of Science degree in psychology requires:

- (1) Four hours of advanced science (other than psychology), making a total of twelve hours in science beyond the common curriculum.
- (2) Satisfactory completion of college calculus.

A suggested schedule for the psychology major seeking a Bachelor of Arts degree is as follows:

Freshman Year

PSY 11-12-13	9
BIO 11-12-13	12
ENG 11-12-13	9
Language 101-102-103	9
Mathematics	5
	<hr/> 44

Sophomore Year

PSY 211, 212-213	12
Physical science 11-12-13 (e.g. Chemistry)	12
Social science (cc)	9
Mathematics	3
Electives	9
	<hr/> 45

Junior Year

Psychology, 300-level	12
Science	8
Humanities (cc)	9
Electives	17
	<hr/> 46

Senior Year

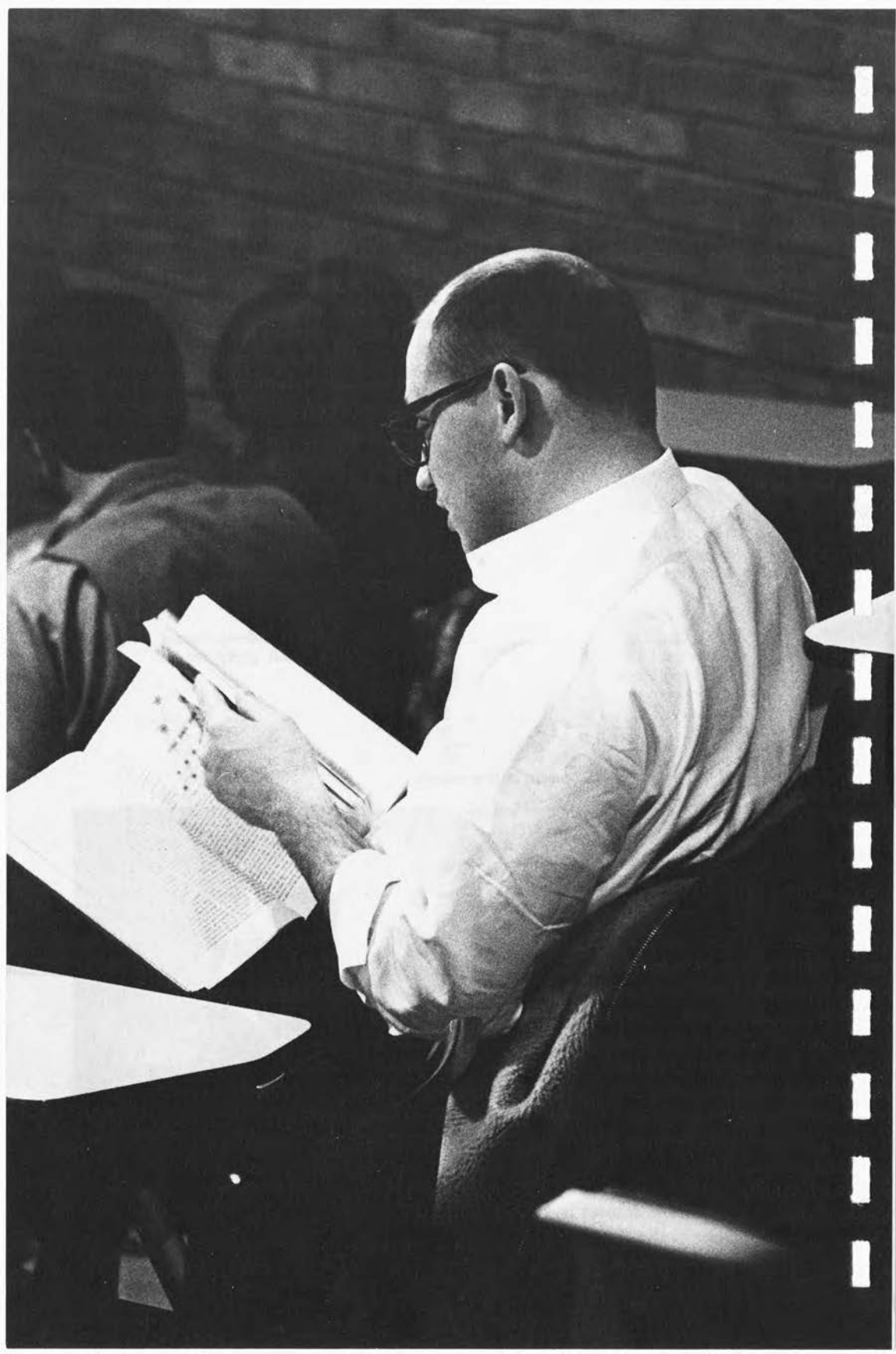
Psychology, upper-level courses	21
Humanities (LA group req.)	9
Electives	15
	<hr/> 45

(cc) denotes Common Curriculum courses.



GRADUATE PROGRAM

No program leading to the Master of Arts or Master of Science degree is offered at the present time, although such a program will be developed in the future. Those courses in psychology which are starred however, may be taken for graduate credit by students enrolled in other programs.



THE DIVISION OF CONTINUING EDUCATION

The Division of Continuing Education has as a primary function the planning, coordination, and guidance of all programs for non-degree seeking students in the University. It is responsible for all such students enrolled at Wright State whether or not for credit, full-time or part-time, day or evening.

Other responsibilities of the Division include: (1) Coordination of the programming and counseling of late afternoon and evening students. The late afternoon and evening courses are a continuation of the daytime program. Courses from the freshman through the graduate level are scheduled. The flexible program permits a student to register as a part-time student, to combine registration with daytime study, or to register for a full program at night if daytime registration is not possible. The extent of the registration depends upon the amount of time that can be devoted to study. When a student is employed full-time, a maximum registration of six hours is recommended. Adults who wish to complete work toward a degree, to pursue further study for self-enrichment, or to qualify for certification will find both beginning and advanced courses in the science, mathematics, humanities, social sciences, education, and business administration. These courses may be taken for credit or may be audited. The graduate student will find graduate courses in education, business administration, engineering, and several areas of the sciences and liberal arts.

(2) Coordination of the summer program of the University. Courses of the lower division, upper division, and graduate levels are scheduled in the summer quarter. The summer quarter is divided into two terms, each of 5½ weeks in length. Courses are scheduled for the full quarter or for either of the terms to permit flexible programming. Transient students, Wright State students seeking to accelerate their programs, teachers working for professional advancement, and others will find a variety of courses.

(3) Responsibility for short courses and other programs of this nature. Short courses and workshops of varying length which may or may not carry academic credit are developed and scheduled for the summer quarter and other times of the year. These courses are developed to meet special needs.

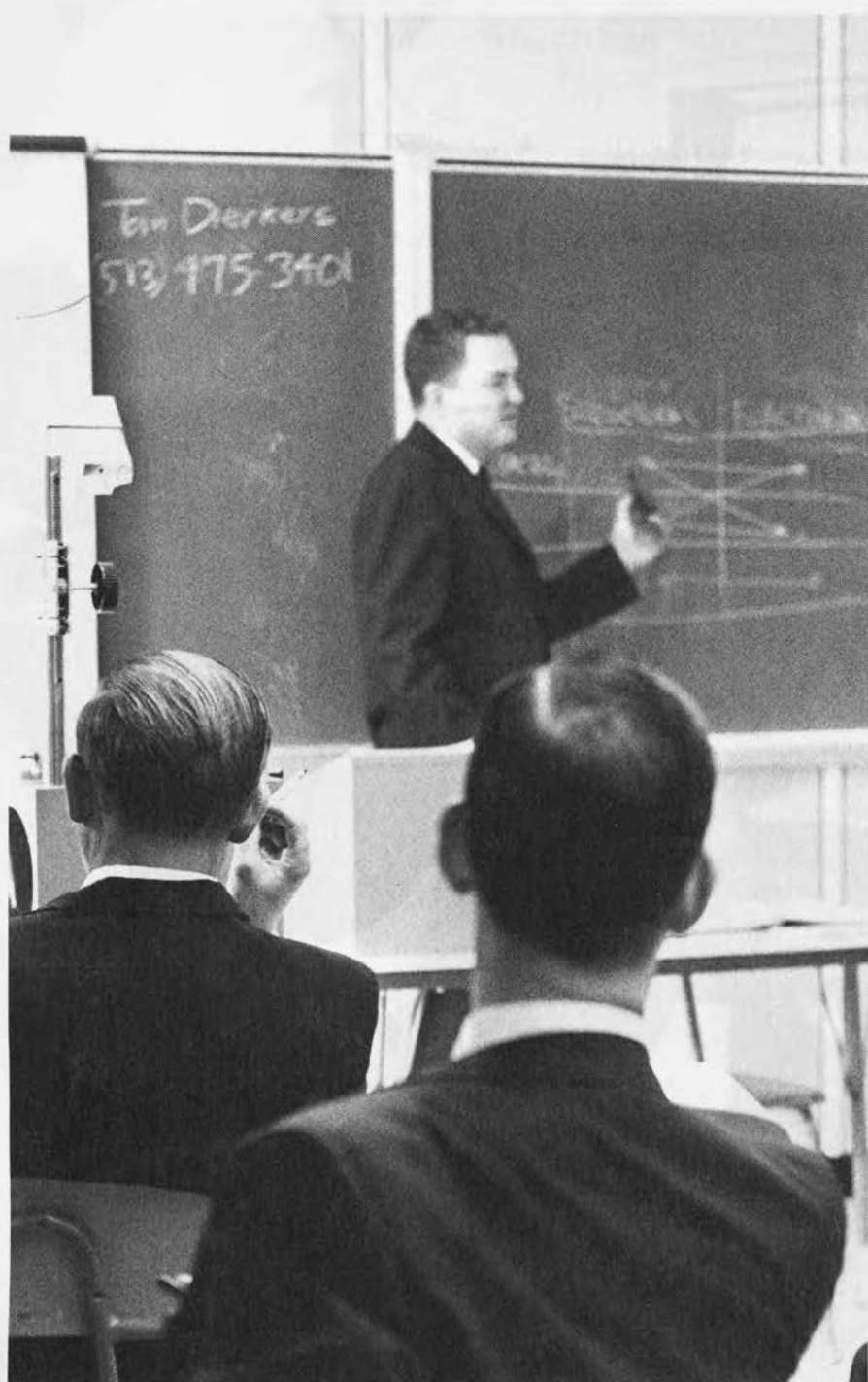
(4) Scheduling of non-credit courses. Courses which do not carry academic credit but which are of university level are developed and scheduled by the Division. These courses are for those who are not concerned with academic credit and a degree but who wish to advance their knowledge through structured courses.

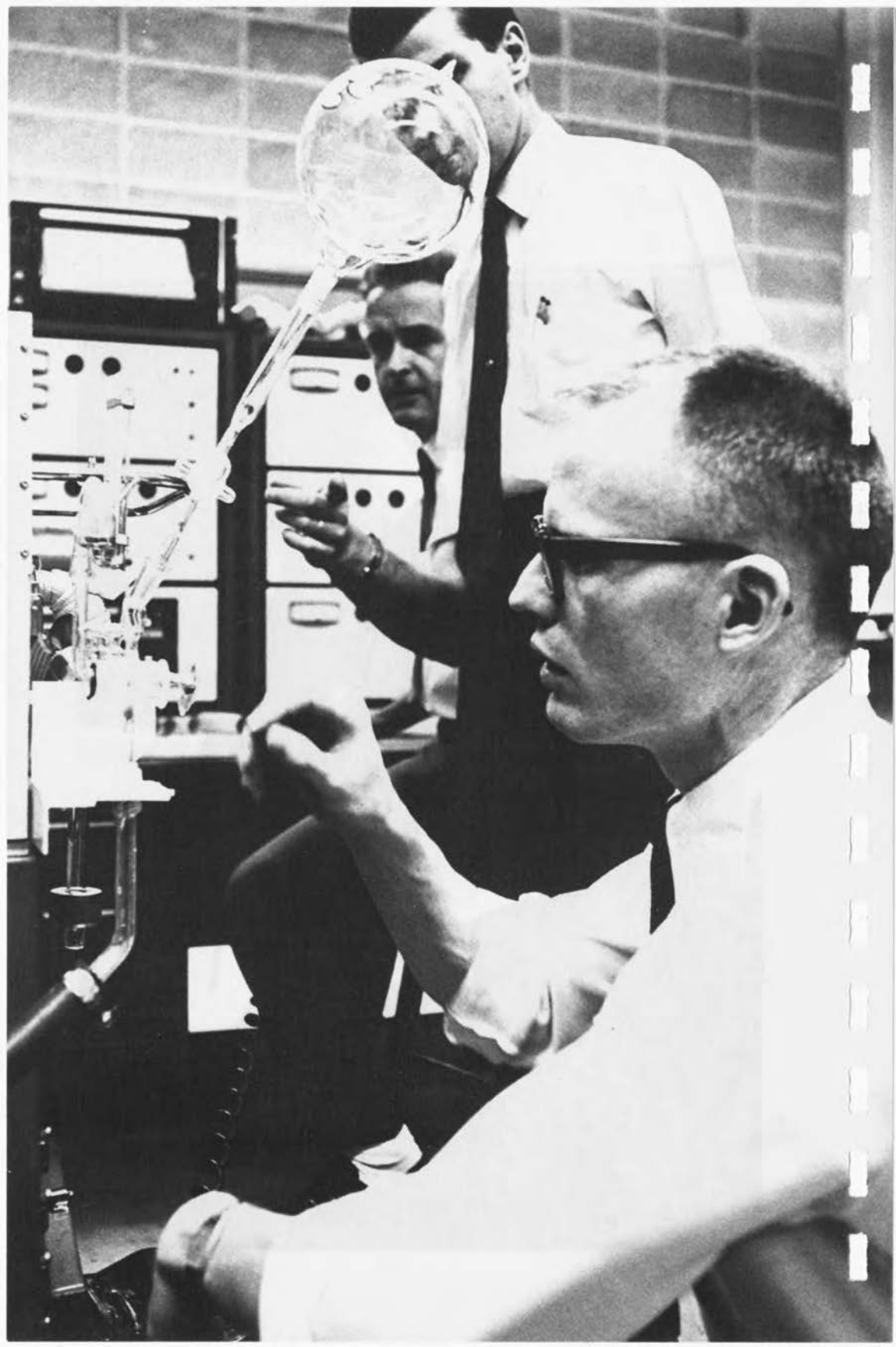
(5) Coordination of the programming and counseling for all off-campus instructional programs.

(6) **The Piqua Academic Center.** The Center has a program of late afternoon and evening courses primarily at the lower division level. Courses at the advanced and graduate levels are scheduled to meet the needs of the area. A student may register for a part-time or a full-time program of courses. Academic counseling is provided by representatives of the academic divisions of the University.

(7) **The Western Ohio Branch Campus (Celina).** The Branch Campus has a program of late afternoon and evening courses primarily at the lower division level. Courses at the advanced and graduate levels are scheduled to meet the needs of the area. A student may register for a part-time or a full-time program of courses. Academic counseling is provided by resident staff members of the Branch Campus.







THE DIVISION OF GRADUATE STUDIES

The graduate program at Wright State University provides advanced professional training in the area of a student's field of specialization and affords opportunities to conduct research and special investigations. The program of graduate study should become an initiation into methods of intensive study and research in some selected area of knowledge. It is the objective of the Division of Graduate Studies to provide its students with a high degree of professional competence.

The divisions and departments which offer programs and the degrees are as follows:

<i>Division</i>	<i>Degree</i>
Business Administration	Master of Business Administration (M.B.A.)
Education	Master of Education (M.Ed.), Master of Arts (M.A.), Master of Science (M.S.)
Science and Engineering	
Biology	Master of Science (M.S.)
Chemistry	Master of Science (M.S.)
Engineering	Master of Science (M.S.)
Geology	Master of Science (M.S.) Master of Science in Teaching (M.S.T.)
Mathematics	Master of Science (M.S.)
Liberal Arts	
History	Master of Arts (M.A.)

In addition, certain departments offer courses which may be taken for graduate credit with the approval of the student's adviser.

DIVISION OF BUSINESS ADMINISTRATION

Graduate work may be taken in the Division of Business Administration leading to the degree Master of Business Administration. The program is designed to offer a broad education in business administration to a graduate student regardless of whether his undergraduate work was in business, the arts, sciences, engineering, humanities, or some other field. Majors are offered in accountancy, finance, management, and marketing. A minimum of 48 credit hours are required for the M.B.A. At least 33 of these hours must be taken in graduate courses in business and economics. A thesis is optional for the degree. Details of the program are found under the offerings of the Division of Business Administration.

DIVISION OF EDUCATION

Graduate work may be taken in the Division of Education leading to one of the degrees, M.Ed., M.A., or M.S.

The M.Ed. degree is awarded only to those individuals qualified for at least a provisional certificate. Individuals who have degrees in disciplines other than education, and who are not qualified for a provisional certificate, can obtain Ohio certification in either elementary or secondary teaching concurrently with their master's degree. Such programs are individualized and must be approved by the Division of Education.

A program of concurrent certification typically will require more quarter hours than the standard master's degree programs, and may necessitate the individual's taking certain undergraduate courses. These undergraduate courses apply to certification requirements, but do not apply as graduate credit toward a master's degree.

The Master of Science degree can be obtained in Personnel Counseling.

The Master of Arts degree in the Division of Education requires a written thesis.

The Master of Education degree may be obtained by following one of two patterns, either:

- (a) 48 quarter hours of course work, or (b) 40 quarter hours of course work plus 5 quarter hours for a research project.*

Details of each of these programs are found under the offerings of the Division of Education.

DIVISION OF LIBERAL ARTS

The department of History offers graduate work which leads to a Master of Arts in History. Details of this program may be found in the Graduate Supplement which is located in the last section of this bulletin.

*Guidance and Counseling requires 54 quarter hours under (a), or 45 quarter hours plus 5 hours for a research project under (b).

DIVISION OF SCIENCE AND ENGINEERING

The Division of Science and Engineering through some of its departments offers programs leading to the Master of Science or Master of Science in Teaching degree. Departments which are presently approved include Biology, Chemistry, Engineering, Geology, and Mathematics. Details of these programs are found under the offerings for the respective departments or in the graduate supplement which is located at the end of this bulletin.

ADMISSION

A student must be officially accepted for admission to the Division of Graduate Studies before he can be permitted to register for graduate credit whether he intends to be a degree student, a non-degree student, or a transient student. Every student who wishes to register for graduate credit must therefore apply for admission unless he has already been admitted and has taken courses in the same program within the last five years. A student who has received a master's degree from Wright State University and has thus completed the program for which he was originally admitted to the Division of Graduate Studies is required to submit a new application indicating his aims in further graduate study.

If a student who has been admitted to non-degree standing later desires to pursue a degree program, he must reapply and have his qualifications judged as of the date of his original admission.

Admission to the Division of Graduate Studies is valid for registration on the Wright State University campus and the Piqua Academic Center.

A student who desires undergraduate credit only does not need to apply for admission to the Division of Graduate Study even though he is already a college graduate.

A student should consult with his specific department about the admission tests or the point average required, since departments may establish requirements that are higher or more stringent than the University-wide minimum requirements.

All correspondence pertaining to the admission of a student to the Division of Graduate Studies should be addressed to the Dean of the Division of Graduate Studies, Wright State University.

Application for admission consists of the presentation of application forms completed by the applicant and an official transcript from each school attended. These should be sent directly to the Division of Graduate Studies. Applications for admission and supporting credentials, including official transcripts of all academic work, should be received at least three weeks before registration for the quarter or summer term in which the student wishes to begin graduate study.

All documents received by the University in connection with applications for admission become the property of Wright State University. Under no circumstances will they be returned to the applicant or forwarded to any agency or other college or university.



ADMISSION TO REGULAR STATUS

All regular candidates for admission to graduate work must:

1. Provide evidence of a bachelor's degree from an accredited college or university and
2. Show evidence of capability to achieve success in a graduate program. The following conditions will serve as evidence of scholarly ability.
 - a. An overall undergraduate grade point average of 2.7 (based on a 4.0 grading system).
 - b. An overall undergraduate grade point average of 2.5 but with a 3.0 or better in the latter half of undergraduate work.
 - c. An overall undergraduate grade point average of 2.5 but with a 3.0 or better in major field.
 - d. Such evidence may also be demonstrated by presenting scores on aptitude tests such as the Graduate Record Examination or Admission Test for Graduate Study in Business, which are satisfactory to the department or division concerned.
3. Further, a candidate must demonstrate sufficient preparation in the field of his intended major to be acceptable to the department concerned. However, on condition that any required prerequisites will be completed on a basis satisfactory to the department concerned, admission to do graduate study may be made prior to completion of prerequisite study.
4. Finally, all candidates for admission to graduate status must be approved for admission by the department in which graduate study is to be pursued. Such approval together with a listing of required prerequisite courses and a tentative graduate study program shall be placed on file in the graduate office. The candidate should consult the specific requirements set forth by the individual department.

ADMISSION ON OTHER THAN REGULAR STATUS

Students who may wish to pursue graduate study at Wright State but who do not meet the requirements of regular admission are required to submit scores of the aptitude portion of the Graduate Record Examination or, in the case of candidates for the Master of Business Administration degree, the Admission Test for Graduate Study in Business. Applicants will ordinarily be required to supply evidence of successful completion of the designated test prior to admission, but in all cases by the end of the first quarter in which the candidate is enrolled. Decision to admit an applicant on conditional status may be based on test scores.

1. *Conditional Status*

Where the candidate has less than a 2.5 grade point average but above a 2.3 grade point average, he may be accepted if his grades in the last half of his undergraduate work constitute a 2.7 or better. In such cases, the candidate will be admitted conditionally. In exceptional cases, a student may be admitted for graduate courses with less than a 2.3 average provided that evidence is presented to show professional achievement in the candidate's career beyond the baccalaureate degree.

2. *Special Status*

A student, by showing evidence of a bachelor's degree from an accredited college or university, may be admitted to pursue graduate work on a non-degree basis with the approval of the department concerned. Such students may be admitted by expression of their desire to pursue continuing education.

3. *Provisional Status*

Under certain conditions, departments and/or divisions may admit graduate students on a provisional basis pending receipt of credentials. However, graduate credit may not be earned unless the student meets the admission requirements during the quarter.

4. *Undergraduate Students Taking Courses for Graduate Credit*

Undergraduate students who are within 24 quarter hours of graduation requirements may be permitted to enroll for graduate credit providing they show evidence of capability to achieve success in a graduate program, and have the approval of the department concerned. Ordinarily, an undergraduate grade point average of 3.0 (based on a 4.0 grading system) shall suffice as evidence of scholarly ability.

5. *Transient Status*

A transient student may be permitted to register upon a statement of graduate standing from the university at which he is a matriculant and an approval of the department concerned.

GENERAL REGULATIONS

WITHDRAWAL FROM THE UNIVERSITY

Application for withdrawal is made on a withdrawal form obtained from the office of the Division of Graduate Studies. When the request for withdrawal has been approved, the Registrar grants an official withdrawal after it has been determined that all obligations to the University have been met.

A student who leaves the University without obtaining an official withdrawal is not permitted a refund of fees and is given the grade F in all courses. The University reserves the right to ask a student to withdraw at any time when it considers such action to be in its best interest.

CHANGE ORDERS

A student who finds it necessary to add a course, withdraw from a course, or correct his registration, requests a change order in the Division of Graduate Studies office. The order does not go into effect until it has been presented to and accepted by the Office of the Registrar.

The dates during which a change order may be processed are indicated in the calendar in the front of this bulletin.

CHANGE OF ADDRESS

A student is responsible for a University office communication sent to him at the last address reported to the Office of the Registrar. Forms for reporting a change of address are available in the Registrar's office.

ASSIGNMENT OF ADVISERS

A student who qualifies for admission to the Division of Graduate Studies confers with the departmental chairman or the chairman of the departmental graduate committee. The chairman will assign a faculty adviser to counsel with the graduate student and prepare the program of graduate study. A copy of the program is returned early in the initial term of study to the Division of Graduate Studies office where it is filed and becomes a part of the record of the graduate student.

QUALIFICATIONS AND STANDARDS FOR CONTINUED GRADUATE WORK

1. *Grade Standards*

All students in graduate study programs are expected to maintain a minimum grade point average of 3.0. No more than nine quarter hours of C may be applied toward a master's degree. A grade average of B or better will normally be considered as the minimum standard for satisfactory completion of course work. The attaining of a large proportion of C grades, even when balanced by A's, can be considered by the faculty as unsatisfactory course work. It should be emphasized that the successful completion of a required number of courses is not sufficient, of itself, to earn a master's degree. A student must also receive the recommendation of the departmental faculty after an evaluation based upon his total performance.

2. *Student Evaluation*

At the completion of one year of graduate work or 24 quarter hours, whichever comes first, each student will be evaluated by the departmental faculty. This evaluation will be based upon his performance in courses, research, and seminars and will be forwarded to the Graduate Dean. On the basis of this evaluation, a student will be:

- A. recommended for continuance of the graduate program,
- B. placed on probationary status, or
- C. required to discontinue graduate study at this University.

3. *Conditional and Probationary Status*

A. Student Admitted on Conditional Status

A student admitted to graduate work on conditional status shall be required to change this status by achieving a grade point average of 3.0 with the completion of 24 quarter hours of graduate credit work at this University.

B. Student Placed on Probationary Status

A student placed on probation after 24 quarter hours shall be required to change this status by achieving a grade point average of 3.0 within the completion of the next 12 quarter hours of credit work. If a portion of these credits are in research for the thesis requirement, the student's major department must certify as to his eligibility to continue studies at the University.

C. Failure to Remove Probationary or Conditional Status

Failure to remove probationary or conditional status shall call for loss of graduate standing and the candidate will be required to petition the Graduate Council for readmission. Only in extreme cases will readmission be granted.

4. *Special Status*

A special student admitted to take graduate courses on a non-degree basis will be subject to the following minimum standards:

- A. The special student must maintain a minimum grade point average of 2.5 (this measure shall be applied after the completion of 12 or more hours).
- B. A minimum grade of C must be earned in all courses attempted. Failure to meet this standard shall eliminate the student from further graduate study.
- C. Special students must receive permission from the department involved to continue work after completion of 12 hours of graduate work.

Upon completion of 12 or more hours, a special student may apply for admission to a graduate degree program. Admission will require that the special student earn at least a B average on all graduate work attempted while in the special student status. Credit earned (not to exceed 15 hours) while the student is in the special classification may be applied toward the graduate degree upon acceptance of the student into full graduate status.

5. *Residence and Credit-Hour Requirements*

A minimum residence of three quarters at Wright State University devoted wholly or partly to graduate work and the satisfactory completion of at least 33 quarter hours of graduate work under the guidance of this university is required. The credit hour load limit for graduate students properly registered in degree programs shall be as follows: full-time, 16 quarter hours; part-time, eight quarter hours (normally two courses).

6. *Transfer of Graduate Credits for Master's Degree*

A maximum of three courses, normally not to exceed 12 quarter hours credit, may be transferred from other institutions if all of the following conditions have been met:

1. The student is in good standing in the other institution.
2. The grades in courses transferred are B or better.
3. The student registers for a minimum of three quarters in the Graduate Division of Wright State University.
4. The credit for the graduate course work at another institution is properly transferred through the *Graduate Division Office* and approved by the graduate committee of the department concerned.

7. *Time Limit*

The time limit for the use of graduate credit toward a master's degree is five years from the beginning date of the earliest course of the last 45 hours applied toward the degree. This shall not preclude the granting of a leave of absence for adequate cause.

8. *Petition Policy and Procedure*

A student who wishes to deviate from the normal graduate school regulations and procedures may present his problem in a letter addressed to the *Graduate Council* signed by himself and endorsed by the department concerned. The Graduate Council will consider the petition and the student will be advised of the Council's decision. Action taken on petitions will not be considered as a precedent for any future action.

MINIMUM REQUIREMENTS FOR THE MASTER'S DEGREE

1. Completion of a minimum of 45 quarter hours of graduate course work.
2. Achievement of a cumulative point-hour ratio of 3.0 average in all courses for graduate credit.
3. Registration during the final quarter of the degree program.
4. Successful completion of a final examination.
5. Presentation of the required copies of an approved thesis when applicable.

FINANCIAL AID

There are two basic types of financial aid to graduate students—fellowships and graduate assistantships or associateships. The fellowships permit full-time study without involvement in services to the University and the assistantships or

associateships require service in either teaching or research. Fellowships may be either restricted to a single department or field of study or may be conferred on a University-wide basis. Assistantships and associateships are related to specific departments and may be funded from University funds or research grants to the University. Associateships are awarded to students of advanced standing and qualifications.

FELLOWSHIPS

Applications for and information regarding fellowships may be obtained from the Dean of the Division of Graduate Studies. In general, the following policies will govern the award of fellowships:

1. Applicants should generally have a grade point average of at least 3.25 of a possible 4.0 in both undergraduate and graduate work unless supplementary evidence is presented which indicates the student is otherwise particularly qualified.

2. Fellows must pursue a full-time schedule of courses or research or both. They must maintain the scholastic standards required of graduate students in good standing and should not be otherwise gainfully employed during the period of the fellowship.

3. Applications for fellowships should be submitted to the Dean of the Division of Graduate Studies. The application must include all supporting documents including two copies of official transcripts and three letters of recommendation. Graduate students not previously admitted to the Division must also submit their application for admission. No applications can be considered for which complete records and recommendations have not been received. Applications will be evaluated first by the departments in which the applicants propose to study and finally by the Committee on Fellowships of the Graduate Council.

4. Fees are waived except a registration fee based on credit hours enrolled. Out-of-state tuition is waived for all Fellows.

5. First consideration for award of fellowships will be given to those applications received prior to March 1. Notification of awards will be made generally no later than April 15.

GRADUATE ASSISTANTSHIPS

Assistantships and associateships are awarded via individual departments of instruction and require of the student a specified amount of time for either assisting in instruction or in research. The balance of the student's time is devoted to graduate studies. Nine-to-10 hours is the average course load. Normally the course load will not exceed three courses or a total of 12 quarter hours. Requests for additional hours during a particular quarter must be approved by the Graduate Council.

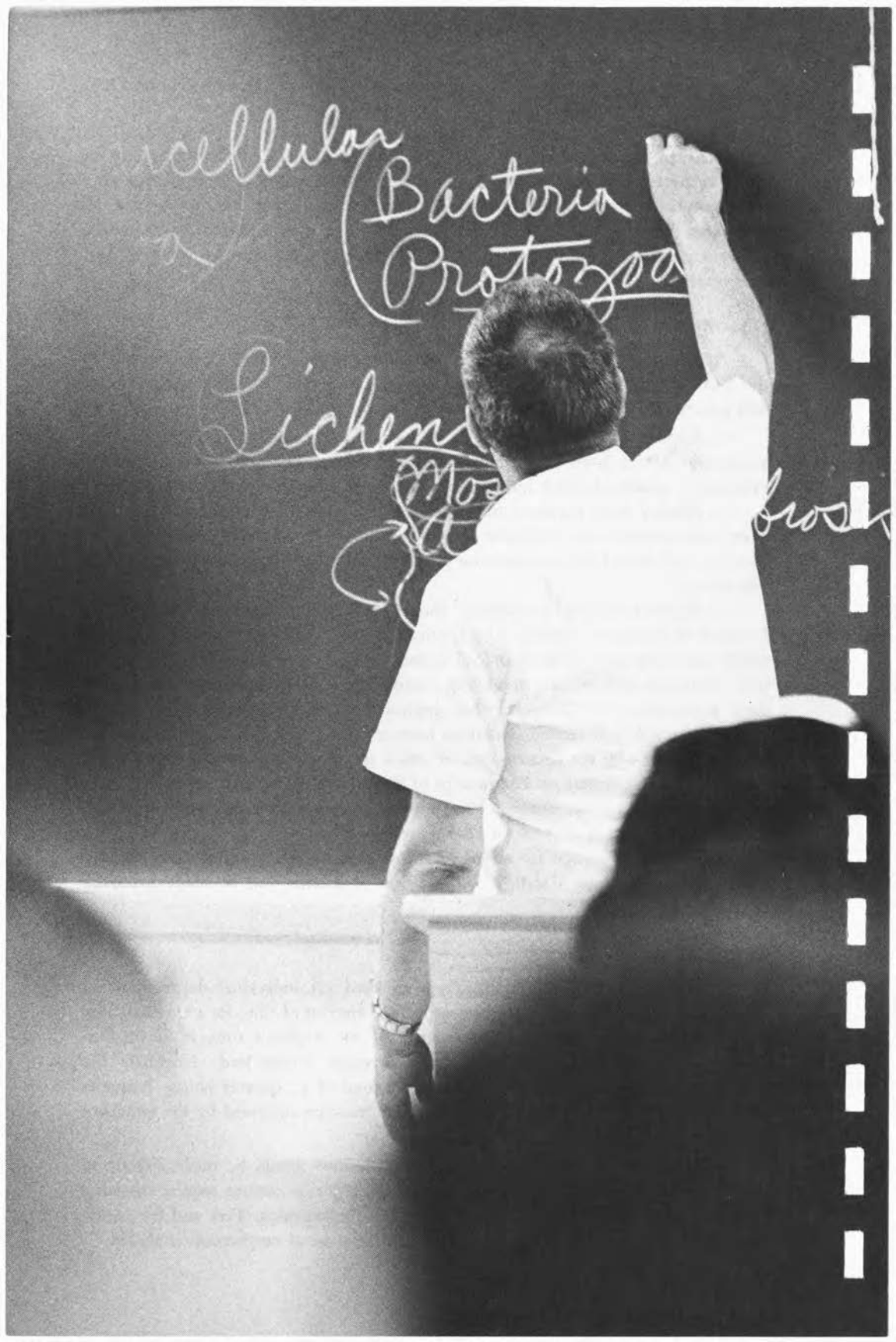
Requests for information regarding assistantships should be made directly to the Chairman of the department involved. In general applications require the same basic supporting documents as those for graduate fellowships. Fees and fee remissions are the same as those of fellowships and the time of notification is similar.

unicellular
(Bacteria
Protozoa)

Lichen

Moss
all
→

bros



COURSES OF INSTRUCTION

Courses designated by consecutive numbers separated by a hyphen (101-102-103) should be taken in the order listed.

Those designated by consecutive numbers separated by a comma (141, 142) are related courses, each giving a quarter's credit. The first *is not prerequisite* to the second unless so indicated in the course description.

Credit hours per quarter are indicated in parentheses after the title.

A course giving graduate credit is marked with a star (*).

Since many courses have been renumbered, course numbers given in earlier catalogs are indicated in parentheses following the present course numbers.

Common curriculum courses are numbered with two digits.

Lower Division courses intended for undergraduate credit are numbered 100-299. (Course numbers indicate the general level of the course: those in the 100 series indicate first year, and those numbered 200 indicate second year.)

Upper Division courses intended primarily for undergraduate credit are numbered 300-499. Courses in the 400 series may provide graduate credit.

Courses intended primarily for graduate credit are numbered 500-599. Undergraduates, with the approval of the division offering the course, may register for undergraduate credit.

Courses offering graduate credit only are numbered 600-799.

ACCOUNTANCY (ACC)

Professor Pabst (Chairman); *Associate Professor* Eiteman; *Assistant Professors* T. Evans, Roehm (on leave 1969-70), Stewart, Throckmorton; *Instructors* Anderson, Greenfield; *Lecturers* Andrews, Jones, McQuate, Worrell.

103 (363) INCOME TAX PLANNING (3)

Individual and business decisions involving federal income taxes. An elective course for students who do not plan to major in accounting.

201-202-203 ACCOUNTING CONCEPTS AND PRINCIPLES (3)

An introduction to accounting for business enterprises including the preparation and analysis of financial statements and reports for managers and other users.

301 (322) MANAGERIAL ACCOUNTING (3)

The generation, analysis, and interpretation of accounting data and reports for planning and controlling business operations and for making special decisions. Prerequisite: ACC 203.

302, 303 (312) INTERMEDIATE ACCOUNTING I AND II (3)

The development of financial accounting theory and its application to complex problems in the valuation of balance sheet accounts, in the determination of net income, and in the preparation of financial statements. Prerequisite: ACC 203.

311, 312 (452) ADVANCED ACCOUNTING I AND II (3)

A thorough study of the fundamental principles and theory of consolidated financial statements and problems in partnership, insolvency, and fiduciary accounting. Prerequisite: ACC 303.

321 (432) COST ACCOUNTING I (3)

Concepts, techniques, and detailed accounting procedures for the manufacturing firm. Prerequisite: ACC 301.

322 COST ACCOUNTING II (3)

The application of cost accounting concepts and techniques to complex problems in manufacturing accounting and to other areas including distribution costs and research and developments costs. Prerequisite: ACC 321.

331 (402) INCOME TAX ACCOUNTING I (3)

The history, theory, and basic tax structure pertaining to individuals and business. Prerequisite: ACC 303.

332 (462) INCOME TAX ACCOUNTING II (3)

Corporate, partnership, estate, gift, social security, and other Federal taxes. Prerequisite: ACC 331.

411 (442) ACCOUNTING SYSTEMS I (3)

The fundamental concepts of information, communication, and systems which form the framework for the design of data processing and accounting systems. Prerequisite: ACC 303 and 321.

412 ACCOUNTING SYSTEMS II (3)

The application of accounting systems in handling principal business transactions and situations. Prerequisite: ACC 411.

421 (401) AUDITING I (3)

An introduction to the principles, standards, and procedures involved in the conduct of an audit by the independent accountant. Prerequisite: ACC 303 and 321.



422 AUDITING II (3)

The application of auditing techniques with emphasis on the audit report and other special reporting problems. Consideration of management services and the auditor's responsibility to third parties. Prerequisite: ACC 421.

431 (466) GOVERNMENTAL ACCOUNTING (3)

The application of accounting principles to fund accounting for government units with consideration given to institutional accounting. Prerequisite: ACC 303 and 321.

477 SPECIAL STUDIES IN ACCOUNTING (1-3)

499 SENIOR SEMINAR (3)

Readings in and discussion of recent accounting literature. Prerequisite: accounting major with senior standing.

GRADUATE COURSES

522 (501) ADVANCED AUDITING (3)

A study of the development of professional auditing with particular emphasis on the theory underlying the development of auditing standards, objectives, and procedures. Prerequisite: ACC 421.

532 (502) INCOME TAX RESEARCH AND PLANNING (3)

Effect of the federal income tax on business decisions, with particular emphasis on the corporate form of organization, methods of minimizing taxes, reorganizations and dissolutions, the use of current tax reporting services, and other reference materials. Prerequisite: ACC 331.

542 (516) FINANCIAL ACCOUNTING THEORY (3)

A brief study of the history of accountancy and the development of accounting concepts and principles and their application in the determination of net income and the presentation of financial statements. Prerequisite: ACC 311.

552 (532) BUSINESS INFORMATION SYSTEMS AND CONTROLLERSHIP (3)

The study of accounting as a comprehensive information system that provides significant financial data needed by management for decision making and control as well as for reporting to outside interest groups. Prerequisite: ACC 411.

601, 602, 603 (600) SEMINAR IN ACCOUNTING (3)

Research and discussion of controversial accounting topics related to the determination of net income and financial position and the uses and limitations of accounting statements and reports. Prerequisite: undergraduate accounting major or consent of instructor.

621-622 GRADUATE SURVEY OF ACCOUNTING I AND II (3)

A course for graduate students covering the equivalent of ACC 201-202-203. Prerequisite: graduate student status.

641 (618) FINANCIAL AND MANAGERIAL ACCOUNTING (3)

A course especially designed for M.B.A. non-accounting majors to develop understanding of accounting concepts underlying the presentation of financial data and reports and the use of accounting in the analysis and control of business operations. Prerequisite: ACC 622 or 203.

681 SPECIAL STUDIES IN ACCOUNTING (1-3)

699 THESIS (1-3)

ART (ART)

Assistant Professors Koerlin, Must; *Instructors* Kiser, Patchen.

101-102-103 FOUNDATIONS OF ART (4)

Elements and principles of art; their application in a wide range of media; design drawing and painting.

201-202-203 DESIGN (3)

Development of the theory and practice of design in various materials. Prerequisites: ART 111-112-113.

221-222-223 BEGINNING PAINTING (3)

Introduction to the use of painting materials and techniques with an emphasis of pictorial structure. Prerequisite: ART 101-102-103 or AED 111-112-113.

231-232-233 LETTERING (2)

A study of calligraphy and the development of type forms. Adaptation of hand lettering to modern uses. Students might also be interested in LETTERING AND CALLIGRAPHY (A 207-A 208) offered at the Dayton Art Institute.

241, 242 HISTORY OF WESTERN ART (3)

A study of architecture, sculpture, and painting from the earliest time through the Greek period to the close of the Gothic period.

251-252-253 DRAWING (2)

Intermediate level drawing problems; life drawing with an emphasis on human anatomy. Prerequisite: ART 101-102-103.

311-312-313 GRAPHIC ARTS (3)

Wood block, metal plate etching, and printing for pictorial purposes.

321-322-323 PAINTING (3)

Life painting and problems of pictorial design using both representational and abstract concepts. Media employed include oil, and acrylic. Prerequisite: ART 221-222-223 and 251-252-253.

351-352-353 THIRD YEAR DRAWING (2)

Drawing problems requiring advanced perceptual and conceptual skills. Prerequisite: ART 251-252-253.

381 SPECIAL STUDIES ON JUNIOR LEVEL

Arrangements made through chairman and faculty.

411-412-413 GRAPHIC ARTS (3)

Etching and related processes. Prerequisite: ART 311-312-313 and 351-352-353.

421-422-423 ADVANCED PAINTING (3)

Application of ideas toward visual problems. Prerequisite: ART 321-322-323 and 351-352-353.

441 ART OF THE RENAISSANCE (3)

The art of the Renaissance in Italy (1300-1600) and the North (1350-1600). Prerequisite: junior or senior standing.

442 BAROQUE ART (3)

The art of the Mannerist, Baroque, and Rococo periods (1600-1800). Prerequisite: junior or senior standing.

443 ART OF THE NINETEENTH CENTURY (3)

Painting and sculpture of the Nineteenth Century in western Europe and America. Prerequisite: junior or senior standing.

444 MODERN ART (3)

Western European and American painting and sculpture of the Twentieth Century. Prerequisite: junior or senior standing.

451-452-453 ADVANCED DRAWING (2)

Advanced problems in the application of drawing disciplines and techniques to the individual approach. Prerequisite: ART 351-352-353.

481 SPECIAL STUDIES ON SENIOR LEVEL

Arrangements made through chairman and faculty.

ART EDUCATION (AED)

Associate Professor Barlow; Instructor Scribner; Lecturer Abell.

111-112-113 (111-112) THE INDIVIDUAL AND THE CREATIVE PROCESS (3) 111 F, 112 W, 113 Sp

(For art education majors) 111: Basic course providing opportunities for student's development and awareness of himself as an individual responding to his environment. 112: Methods and disciplines of creating with materials and tools. 113: Continued opportunities for student work with art materials, providing experiences for individual awareness of the creative process.

114 EXPLORATION OF LINEAL CONCEPTS (4)

A combination studio and seminar in drawing and two-dimensional materials. Studio work will consist of discovering ways of expressing environmental concepts through pencil, crayon, inks, opaque paints, and other materials common to the public school. Seminar will consist of discussions of motivational techniques for promoting two-dimensional work. Methods of drawing with elemental tools that correspond to child growth and development will be stressed. Prerequisite: Fine Arts 102.

223 (271) CRAFTS FOR TEACHERS (4) F, W, Sp

Creative problems in paper, wood, clay, fibers, and metal for the elementary grades. Participation and observation expected during this course. Prerequisite: AED 111-112-113, or AED 231, or consent of instructor.

231 (162) THE INDIVIDUAL AND THE CREATIVE PROCESS (4) F, W, Sp

(For elementary education majors) A basic course providing experiences for the elementary teacher's awareness of himself as an individual responding to his environment, and for the recognition of the role of art in our culture. Included are methods and disciplines of creating with materials and tools. Drawing and painting are included.

330 (319) ART IN THE PUBLIC SCHOOL (4) F, W

Understanding the needs of the child in art expression; study of teaching techniques, materials, and curriculum organization; in-field work with children prior to student teaching. Prerequisite: AED 431 or AED 331, and at least a minor in the field, or consent of chairman.

331 (462) THE CHILD AND THE CREATIVE PROCESS (4) F, W, Sp

(For elementary education majors) Developing an understanding of child growth and development through creative expression. Experiences in drawing and painting are emphasized. Prerequisite: AED 231 or AED 223 and ED 203 or equivalent.

332 (353) SCHOOL EXHIBITS AND DISPLAYS (4) W

Lettering and design problems as related to posters, display, and scenery. Individual and group techniques as related to the school program. Prerequisite: AED 111-112-113, or AED 231, or consent of instructor.

411* DESIGN: PROCESS AND MATERIAL (4) Sp

Advanced course in two- and three-dimensional design problems involving a wide range of techniques and materials related to teaching. Personal involvement in experimental approaches related to course problems. Prerequisite: AED 111-112-113, or 231 or equivalent, and eight advanced credit hours in art education.

412* (421) INTERIOR DESIGN (4)

Problems to help the public school art teacher develop an understanding of art appreciation for contemporary interior design. Areas such as furniture, fabrics, and interior architecture explored. Prerequisite: 16 credit hours in art education.

420*-421*-422* (401,402) ART METAL, JEWELRY I, JEWELRY II (3)

420: Development of skill in the manipulation of materials and tools for metal work. Creative problems in contemporary functional design. 421: Creative designing and making of jewelry. Technique and craftsmanship for various materials. 422: Advanced problems in the design and making of jewelry forms.

423*-424*-425* (403, 404) GENERAL FABRICS WEAVING, TEXTILES (3) 423 F, 424 W, 425 Sp

423: Introduction to fabrics as an art form. Beginning techniques of batik, weaving, stitchery, silkscreen printing. 424: Use of loom and other hand techniques in weaving. Experimental approaches explored in the completion of original ideas. 425: Methods of silkscreen printing on fabrics; emphasis on silkscreen as it may be used in the public school program; analysis of textile design in contemporary living.

426* (405) STITCHERY (4)

A study of the various methods and procedures to use in working with stitchery and applied forms; exploration of ways to work with flat and stitched fabrics that lead to wall hangings and other fabric art forms.

427* SCULPTURE IN THE PUBLIC SCHOOL (4) W

Three dimensional expression providing an over-all view of sculpture and its relationship to the student and the creative process. Studio work in wire, clay, casting, plaster, wood, stone, and wax. Prerequisite: AED 111-112-113 and 223.

428* (481) PUPIL EXPRESSION THROUGH MURAL PAINTING (4)

The development of individual creative expression through mural painting; the application of the mural technique to the public school program. Prerequisite: 16 credit hours of art education, four of which must be advanced.

429* (491) WORKSHOP IN ART EDUCATION (4)

A workshop dealing with problems, processes, and techniques for the development of art activities in the elementary and secondary school. Work consists of the development of craft processes concerned with suitable projects for classroom work and public art education curricula. Taught during spring and/or summer sessions only.

431 (462A) THE CHILD AND THE CREATIVE PROCESS (4) W

(For art education majors) Developing an understanding of child growth and development through creative expression, with emphasis on the functions and procedures of art in the classroom. Experiences in drawing and painting are emphasized. Prerequisite: AED 223 and ED 203 or equivalent.

432* (463) THE ADOLESCENT AND THE CREATIVE PROCESS (4) W

Fundamental course to help the prospective teacher to become aware of the creative growth and development of the adolescent. Laboratory experiences include problems of implementing a secondary art curriculum. Prerequisite: AED 431, or AED 331 or consent of instructor.

433*, 434* (471, 472) PROBLEMS FOR THE ELEMENTARY AND SECONDARY SCHOOL (4)

Integration of art in the general public school program. Discussions, library research, and individual problems. Prerequisite: 16 credit hours of art education, eight of which must be advanced.

435* INTERNATIONAL ART EDUCATION (4)

A study of creative expression as it is seen in various cultures, with emphasis on contemporary issues in art education. A course to provide the teacher with a better understanding of art education on an international scope. Stress is given to method and procedures of implementing creative expression in various cultures, and understanding of these cultures is gained through their creative efforts. Prerequisite: two years of college or equivalent.

436*, 437* (541, 452) MINOR PROBLEMS IN ART EDUCATION (4)

Individual problems in specified areas for the purpose of intense and concentrated work in one or more media; the development of a proficiency in one or more craft areas. Prerequisite: 16 hours of art education advanced crafts.

440* (470) WORKSHOP/FIELD TRIP IN ART EDUCATION (1-3)

A one-week workshop/field trip planned to survey the visual and performing arts. Visits to museums, galleries, and commercial sources of contemporary design and architecture.



Participants will be required to submit a written and/or visual evaluation of the places visited. Prerequisite: one year of college or equivalent.

441* (473) ART APPRECIATION FOR THE PUBLIC SCHOOL (4)

Understanding the influences and the interaction of the creative arts in our present culture. Emphasis on the importance of developing appreciation in the public school and its application to teaching. Prerequisite: 16 credit hours of art education, eight of which must be advanced.

521* (502) GRADUATE STUDY IN CRAFTS (3-5) F, W

Individual problems in several craft areas to meet the needs of teachers of art. Prerequisite: 16 credit hours of art or art education.

531* (614) DEVELOPMENT OF ART EDUCATION (4)

Critical evaluation of the growth and development of the trends, principles, and theories in the field of art education as they have emerged in the U.S. and abroad. Prerequisite: a bachelor's degree in art education, elementary or secondary education, or art; and consent of instructor.

532* (616) CREATIVE AND NON-VERBAL COMMUNICATION (4)

A study of the comparative relationship between the creative process and the human need for non-verbal communication as it affects art and education. Prerequisite: a bachelor's degree.

533* ART EDUCATION AND THE SPECIAL STUDENT (4)

A course to provide experiences which will help the teacher to become aware of art education and its therapeutic aspects. Approaches to working with the mentally and physically handicapped will be stressed with emphasis on creative education. Prerequisite: a bachelor's degree in art education, elementary or secondary education, or art; advanced educational psychology, graduate standing, and consent of instructor.

534* (518) ART EDUCATION AND PERSONALITY (4)

A course in which human potentialities as related to the creative process are explored, with emphasis on human change resulting from creative expression and adjustment. Prerequisite: a bachelor's degree in art education, elementary or secondary education, or art; advanced educational psychology, graduate standing.

551* (617) CURRENT PROBLEMS IN ART EDUCATION (4)

As seen in books, journals, and other professional publications; to encourage research and/or experimental investigations leading to writing for publication. Prerequisite: a bachelor's degree.

552* RESEARCH IN ART EDUCATION (3)

A course to provide research techniques in art education from the initial planning stages to the completion of a thesis or paper. Emphasis is given to the study of current and past research, and to the development of a problem utilizing appropriate research techniques. Prerequisite: a bachelor's degree in art education.

621* (620) SPECIAL PROBLEMS IN ART EDUCATION (4-16)

Advanced study in a specific creative area in art education. A written report of research and investigation is required. Students may repeat this course for credit in different areas. Prerequisite: a major or minor in art education or art, beginning course or courses in the areas of specialization, graduate standing, and consent of instructor.

631* (619) SUPERVISED ART IN THE PUBLIC SCHOOLS (4)

Problems of teaching and supervising art in various types of communities and schools. Developing the ability to organize art materials and to interpret creative art methods. Prerequisite: a bachelor's degree in art education, elementary or secondary education, or art.

699* THESIS (3-9)

BIOLOGY (BIO)

Professors Hutchings (Chairman), Kmetec; *Associate Professors* Batra, Fritz, Honda, Hubschman, Nussbaum, Seiger; *Assistant Professors* Foley, McFarland, Rossmiller; *Instructors* Burger, Kuntzman; *Teaching Associates* Gleason, Moses.

11-12-13 PRINCIPLES OF BIOLOGY (4)

An introduction to the basic concepts of biology. Topics include ecology, diversity of life, physiology, the cell, genetics, and evolution.

CORE COURSES

Courses from 210 through 410 constitute the departmental core required of all majors. BIO 11-12-13 or equivalent with a minimum grade average of 2.0 or departmental approval are required for admission to core courses.

210 CYTOLOGY (3)

Elements of cell structure with emphasis on functional interrelationships. Prerequisite: BIO 11-12-13, CHM 113, or consent of instructor. 2 lect.

211 HISTOLOGY (2)

An introduction to the histological analysis of function. Basic preparative techniques and an understanding of tissue organization will be stressed. Prerequisite: BIO 11-12-13. Corequisite: BIO 210. 2 lab.

212 GENETICS (3)

The function of the gene and its role in the quantitative, physiological, and population genetics of plants and animals. Prerequisite: BIO 11-12-13. 2 lect.

213 MICROBIOLOGY (2)

Morphology, cultivation, and biochemical activity of microorganisms. Prerequisite: BIO 11-12-13, CHM 113, or consent of instructor. 2 lect.-lab.

214 DEVELOPMENTAL BIOLOGY (3)

Elements of the reproductive processes in plants and animals with emphasis on embryological development and origin of tissues. Prerequisite: BIO 210, 211, 212, 213. Corequisite: BIO 215. 2 lect.

215 DEVELOPMENTAL BIOLOGY LABORATORY (2)

Embryology of plants and animals including preceding reproductive processes. Corequisite: BIO 214. 2 lab.

310 MOLECULAR BIOLOGY (3)

The molecular basis of the living state. Particular emphasis is placed on the molecular mechanisms of inheritance and the genetic control of metabolism. Prerequisite: BIO 214, 215 and CHM 213, or consent of instructor. 2 lect.

311 MOLECULAR BIOLOGY LABORATORY (2)

Isolation, characterization, and quantitation of macromolecules, introductory enzymology, mechanisms of the genetic control of metabolism. Corequisite: BIO 310. 2 lab.

312 ANIMAL BIOLOGY (3)

Basic adaptive mechanisms and their coordination in the activities of the Metazoa. Prerequisite: BIO 214. 2 lect.

313 ANIMAL BIOLOGY LABORATORY (2)

Anatomy and physiology of the Metazoa. The functional correlates of multicellularity and environment will be stressed. Corequisite: BIO 312. 2 lab.

314 PLANT BIOLOGY (3)

Structure, function, growth, development, and ecology of plants. Prerequisite: BIO 310, 311. Corequisite: BIO 315. 2 lect.

315 PLANT BIOLOGY LABORATORY (2)

A laboratory course designed to illustrate the material of BIO 314. Corequisite: BIO 314. 2 lab.

410 ENVIRONMENTAL BIOLOGY (4)

An introduction to ecology with emphasis on the organism's interaction with the environment. Prerequisite: BIO 313, 315.

ADDITIONAL COURSES

Unless otherwise indicated, the core courses or departmental approval are required for admission to all courses numbered 400 or higher. Starred courses in the 400 series may be taken for graduate credit with consent of department chairman.

301 HUMAN ANATOMY AND PHYSIOLOGY (5)

Basic anatomy and physiology of the human with considerations of abnormalities, disease, and health. Cannot be used for credit toward the Bachelor of Science or Bachelor of Arts degrees in biology. Prerequisite: BIO 11-12-13 or consent of instructor. 3 lect. 1 lab.

401 TOPICS IN MODERN BIOLOGY (3)

Consideration of current thought in the interpretation of biological phenomena. This course is designed for secondary school teachers of biology and for science majors. Cannot be used for credit toward the Bachelor of Science or Bachelor of Arts degrees in biology. 2 lect.

417* EVOLUTION (3)

An introduction to the biological, philosophical, theological, and ethical aspects of the concepts of evolution. 2 lect.

421* BIOCHEMISTRY I (3)

Chemistry of biological compounds and introduction to enzymes. Prerequisite: organic chemistry or consent of instructor. 2 lect.

422* LABORATORY FOR BIOCHEMISTRY I (2)

Quantitative techniques in biochemistry; chemical and instrumental methodology. 1 lab. 1 rec. Corequisite: BIO 421. May be taken separately with consent of instructor.

423* BIOCHEMISTRY II (3)

Intermediary metabolism of carbohydrates, proteins, nucleic acids, and lipids. Prerequisite: BIO 421. 2 lect.

424* LABORATORY FOR BIOCHEMISTRY II (2)

Properties of enzymes, enzyme catalyzed reactions, and application of isotopes to the study of metabolism. Corequisite: BIO 423. May be taken separately with consent of instructor. 1 lab. 1 rec.

425* PLANT PHYSIOLOGY (4)

A study of the physiological and biochemical processes unique to plants including respiration, photosynthesis, hormone action, mineral uptake, and water transport. 2 lect. 1 lab.

426* PATHOGENIC MICROBIOLOGY (4)

A study of microorganisms pathogenic for man and animals with emphasis on mechanisms of infection, resistance, and laboratory diagnosis. Prerequisite: BIO 213 and consent of instructor. 1 lect. 2 lab.

472* THE INVERTEBRATES (4)

The morphology, development, physiology, and evolutionary relationships of major invertebrate groups. 2 lect. 2 lab.

478* ANIMAL BEHAVIOR (4)

The physiology, phylogeny, and ontogeny of behavior. Also listed as 478 Animal Behavior in the course offerings of the Psychology department. Prerequisite are either PSY 11-12-13 and 311, or BIO 11-12-13 and 312, 313, and consent of instructors. 2 lect. 2 disc.

483* COMPARATIVE VERTEBRATE PHYSIOLOGY (4)

Mechanisms of organic maintenance considered as examples of the application of information theory. Prerequisite: BIO 312. 2 lect. 1 lab.

492 SENIOR SEMINAR (1)

Literature survey and discussions of selected topics.

499 SPECIAL PROBLEMS IN BIOLOGY (1-3)

Prerequisite: departmental approval.

523* ENZYMES (3)

Current concepts of the mechanisms of enzyme catalysis, to include topics such as structure, kinetics, energetics, allosterism, coenzymes, and properties of enzymes and multi-enzyme systems. Recommended preparation (rec. prep.): CHM 411, 412, 413, 415. 2 lect.

524* CELL PHYSIOLOGY (3)

The behavior of the cell and its constituents in the expression of the characteristic properties of life. Metabolism, reproduction, and motion will be treated. Rec. prep.: BIO 210, CHM 212. 2 lect.

528* PHOTOBIOLOGY (3)

Selected topics in photobiology. Rec. prep.: BIO 421, 422, 423, 424, 425. 2 lect.

532* MICROBIAL PHYSIOLOGY (3)

A study of the physiological and biochemical processes unique to microorganisms. Rec. prep.: BIO 310, 311, CHM 212.

533* LABORATORY FOR MICROBIAL PHYSIOLOGY (2) 2 lab.

543 RADIOISOTOPE PRINCIPLES (4)

Principles of α , β , and γ radiation and methodology of counting, with application of tracers to physical and biological problems. Rec. prep.: Physical chemistry or consent of instructor. 2 lect. 1 lab.

581* GENERAL ENDOCRINOLOGY (3)

An introduction to comparative aspects of chemical control in animals. Rec. prep.: BIO 421, 422, 423, 424. 2 lect.

582* GENERAL ENDOCRINOLOGY LABORATORY (1)

Examples of chemical control and principles of bioassay. 1 lab.

585* INVERTEBRATE DEVELOPMENT (5)

Advanced study of growth and development of invertebrates. Rec. prep.: BIO 214-215, 472. 2 lect. 2 lab.

586* EXPERIMENTAL MORPHOLOGY (3)

Examination of development and the periods therein when the organism is most susceptible

to physiological insult. Emphasis will be given to birds and mammals. Rec. prep.: BIO 214, 215, BIO 483. 2 lect.

587* EXPERIMENTAL MORPHOLOGY LABORATORY (2)

The effects of experimental procedures and abnormal environments on the development of the avian and mammalian embryo. Concurrent registration with BIO 586. 2 lab.

600* GRADUATE SEMINAR (1)

625* METABOLIC CONTROL PROCESSES (3)

Selected topics on the molecular basis of control processes in living systems. Rec. prep.: BIO 421, 422, 423, 424. 2 lect.

699* GRADUATE RESEARCH (2-18)

Supervised thesis research.

Note: A separate fee may be charged for required field trips.

BUSINESS (BUS)

Professor Anon (Economics); Associate Professors Ahmad (Quantitative Business Analysis), Cox (Quantitative Business Analysis), Murray (Management), Schrickel (Management), Wade (Law, Acting Chairman); Assistant Professors W. Evans (Business), Lai (Quantitative Business Analysis), Laycock (Law), Tilton (Education), Wise (Marketing); Instructor Wagley (Business); Lecturer Harrison.

101-102 BUSINESS ADMINISTRATION (3)

Introductory course.

301 INTRODUCTION TO STATISTICAL ANALYSIS (3)

Statistical methods useful in the analysis of business problems. The theory and application of frequency distributions; measures of location; variation and further descriptions. An introduction to probability; expectations, games, and decisions; theoretical probability distributions; sampling and sampling distribution. A systematic presentation of price and quantity indexes; seasonal trend and cycle analysis. Prerequisite: MTH 128, 129, 130.

302 INTRODUCTION TO STATISTICAL INFERENCE (3)

Emphasis is placed on the setting of standards as aids in decision making. Techniques specifically covered are inferences concerning means; standard deviations; proportions; analysis of variance; non-parametric tests; linear regression, and correlation. Prerequisite: BUS 301.

303 INTRODUCTION TO OPERATIONS RESEARCH TECHNIQUES (3)

Study of those modern mathematical and analytical techniques useful in solving business problems. Examples of techniques examined are mathematical programming, queuing theory, search theory, game theory. Prerequisite: MTH 128, BUS 301, 302.

311 INTRODUCTION TO ELECTRONIC DATA PROCESSING (3)

Development of electronic data processing. An analysis of programming as applied in accounting, production, financial, marketing, and other business systems. Laboratory exercises in programming with the use of electronic processing equipment. Prerequisite: ACC 201, BUS 301.

312 ELECTRONIC DATA PROCESSING METHODS (3)

Its significance for management. Stored program concept techniques of systems design, and management problems concerned with the mechanization of data processing. Prerequisite: BUS 303, 311 or permission of instructor.

401 BUSINESS LAW I: *Introduction to the Legal Environment of Business* (3)

Introduction to law and legal systems, History of law, the federal and state court systems, Crimes, Torts, The Uniform Commercial Code, Contracts and Property. Prerequisite: senior standing.

402 BUSINESS LAW II: *The Law of Business Associations* (3)

Introduction to Business Associations, Agencies, Partnerships, Corporations and other Associations. Prerequisite: BUS 401.

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403 BUSINESS LAW III: *The Law of Commercial Transactions* (3)

Commercial Transactions in General, Commercial Paper (bills and notes), sales secured transactions, and bankruptcy. Prerequisite: BUS 401.

411 (472) QUANTITATIVE METHODS FOR BUSINESS DECISIONS (3)

Uses of formal models, models of the decision problem, rational choice under uncertainty, sequential descriptive models, multistage control. Prerequisite: BUS 302 and an introductory course in calculus.

412 (472) APPLICATIONS OF OPERATIONS RESEARCH TECHNIQUES (3)

Stochastic decision models, non-linear programming, dynamic programming, Markov decision processes. Prerequisite: BUS 303.

477 SPECIAL STUDIES IN BUSINESS (1-4)

Registration only with consent of instructor.

481 BUSINESS POLICY (3)

Analysis and constructive treatment of selected business problems. Prerequisite: senior standing.

482 GOVERNMENT AND BUSINESS (3)

Relations of business and government. Prerequisite: senior standing.

483 BUSINESS ENTERPRISE AND PUBLIC POLICY (3)

"Great books" in government and business will serve as a focal point for seminar work designed to give students experience in synthesizing ideas, research, and writing expression. Prerequisite: BUS 482.

491 SENIOR SEMINAR IN QUANTITATIVE BUSINESS ANALYSIS (3)

A seminar for seniors in the field of quantitative business analysis designed to acquaint the student with current and future trends in automation and research techniques. Prerequisite: open only to seniors in quantitative business analysis or by permission of the instructor.

GRADUATE COURSES

511 BEHAVIORAL THEORY OF ORGANIZATION (3)

This course is designed to show how the results of recent social science research can be used to improve productivity levels through the use of motivational principles differing from those principles now in common use.

611 GRADUATE SURVEY IN BUSINESS LAW (3)

Introduction to law and legal systems, History of law, the federal and state court systems, Crimes, Torts, The Uniform Commercial Code, Contracts and Property, Business Associations, and Commercial Transactions.

621 GRADUATE SURVEY IN STATISTICS (3)

A survey course of basic statistical techniques designed for persons having had no previous work in statistics.

622 MATHEMATICS FOR BUSINESS RESEARCH (3)

Topics to develop competence in quantitative methods for the analysis of business problems. This course is designed to strengthen the mathematics backgrounds of students having had little or no formal training in linear algebra and calculus.

623 (622) QUANTITATIVE METHODS OF BUSINESS DECISIONS I (3)

A study of decision making under uncertainty, including such topics as decision theory, probability models, sampling, inference, estimation, regression, and time series. Prerequisite: MTH 129, 130 or BUS 621.

624 (622) QUANTITATIVE METHODS OF BUSINESS DECISIONS II (3)

A presentation of various topics related to the mathematical analysis of business applications: theory of queues, inventory control model, linear and dynamic programming, game theory, and simulation. Prerequisite: MTH 129 or BUS 622.

631 ADMINISTRATIVE POLICY AND DECISIONS (3)

Prerequisite: completion of graduate requirements and candidacy for the M.B.A. degree.

681 SPECIAL STUDIES IN BUSINESS (1-4)

Registration only with consent of instructor.

CHEMISTRY (CHM)

Professors Battino, Conley, Skinner; *Associate Professors* Fortman, Kane, Karl (Chairman), Servé; *Assistant Professors* Bernstein, Hess; *Instructors* Beard, Cook.

11-12-13 ELEMENTARY CHEMISTRY (4)

A course in the principles of chemistry, and the chemistry of important elements and compounds, including the compounds of carbon. For students not intending to major in science whether they have had high school chemistry or not and for students who do not present one unit of high school chemistry for entrance. May be followed by CHM 109 to prepare student for second year chemistry. Prerequisite: MTH 102 or equivalent. 2 lect. 1 rec. 1 lab.

106-107-108 GENERAL CHEMISTRY (3)

A course in fundamental chemical principles, the chemistry of the elements and their compounds, and qualitative analysis of the cations and anions. For engineering students only. Prerequisite: one year high school chemistry, MTH 102 or equivalent. 2 lect. 1 rec.

109 GENERAL CHEMISTRY (6)

A course in selected topics and qualitative analysis of anions and cations. Designed to follow CHM 11-12-13 and prepare students for second year chemistry. Prerequisite: CHM 12. 3 lect. 2 lab.

111-112-113 GENERAL CHEMISTRY (5)

A course in fundamental chemical principles, the chemistry of the elements and their compounds, and qualitative analysis of the cations and anions. The laboratory work is designed to illustrate the lecture material including the principles of qualitative analysis of the anions and cations. For students who intend to major in science or study second year chemistry. Prerequisite: one year high school chemistry, MTH 102 or equivalent. 2 lect. 1 rec. 1 lab.

211-212-213 ORGANIC CHEMISTRY (5)

A course in the principles, theories, and applications of the chemistry of the compounds of carbon with laboratory illustrations of the lecture material and the techniques of preparative organic chemistry. Prerequisite: CHM 113 or 109. 2 lect. 2 lab.

Starred courses in the 300-400 series may be used for graduate credit by graduate students other than chemistry majors.

311* ANALYTICAL CHEMISTRY I (6)

A course in the systematic classification and identification of organic compounds by chemical and instrumental methods. Prerequisite: CHM 213. 2 lect. 3 lab.

312* ANALYTIC CHEMISTRY II (6)

An introductory course in gravimetric, volumetric, colorimetric, and electrochemical analysis, including calculations and interpretation of chemical data. Prerequisite: CHM 113 (or 109). 2 lect. 3 lab.

313* ANALYTICAL CHEMISTRY III (6)

Introduction to the theory and practice of modern chemical instrumentation. Topics include elementary electronics, spectrophotometry, polarography, radioactivity and chromatography. Prerequisite: CHM 412 and 312. 2 lect. 3 lab.

319 CHEMICAL LITERATURE (1)

Introduction to chemical literature in journals, handbooks, abstracts, monographs, and patents. Literature searches will be required in a variety of chemical areas. Prerequisite: CHM 212 and 411. 1 lect.

411*-412*-413* PHYSICAL CHEMISTRY (3)

A course in the theoretical aspects of chemistry including thermodynamics, chemical kinetics, molecular structure and spectra, and the structure of solids and liquids. Prerequisite: CHM 113 or 109, MTH 231, PHY 142 or consent of instructor. 2 lect.

415* PHYSICAL CHEMISTRY LABORATORY (2)

A course in the experimental methods of physical chemistry. Prerequisite: CHM 412. 2 lab.

420*-421* INORGANIC CHEMISTRY (3)

The principles and concepts of inorganic chemistry, including the periodic table, atomic structure, bonding, coordination compounds, and an introduction to group theory. Prerequisite: CHM 413 or consent of instructor. 2 lect.

425* INORGANIC PREPARATIONS (2)

Preparation of representative inorganic compounds. Prerequisite: CHM 421. 2 lab.

488* INDEPENDENT READING (1-3)

Prerequisite: consent of department.

499* SPECIAL PROBLEMS IN CHEMISTRY (1-4)

Prerequisite: senior standing and consent of department.

520 ADVANCED INORGANIC CHEMISTRY I (3)

A study of the modern theories of valence, structural inorganic chemistry, and the chemistry of non-metals. Prerequisite: CHM 413, its equivalent or consent of instructor. 2 lect.

521 ADVANCED INORGANIC CHEMISTRY II (3)

A thorough examination of the chemistry of the metals stressing the transition elements, ligand field theory, and mechanisms of inorganic reactions. Prerequisite: CHM 520, its equivalent or consent of instructor. 2 lect.

522 ADVANCED INORGANIC CHEMISTRY III (3)

A survey of the applications of physical methods in the examination of inorganic compounds. Prerequisite: CHM 521, its equivalent or consent of instructor. 2 lect.

525 INORGANIC PREPARATIONS (2)

A laboratory course demonstrating the techniques of preparation, separation, and characterization of representative inorganic compounds. Prerequisite: CHM 421, its equivalent or consent of instructor. 2 lab.

530 INSTRUMENTATION (6)

Introduction to modern instrumental methods of analysis, elementary electronics, electro-analytical methods, radioactivity, spectrophotometry, other physico-chemical and instrumental techniques. Prerequisite: CHM 413 and 312 or its equivalent or consent of instructor. 2 lect. 3 lab.

540 STRUCTURAL CONCEPTS IN ORGANIC CHEMISTRY (3)

A study of molecular orbital theory, reactive species, theories of acids and bases, and an introduction to stereochemistry. Prerequisite: CHM 213, its equivalent or consent of instructor. 2 lect.

541 ELEMENTS OF ORGANIC REACTIONS (3)

A discussion of the more important organic reactions including their scope, limitations, and mechanisms. Prerequisite: CHM 540, its equivalent or consent of instructor. 2 lect.

542 SYNTHETIC ORGANIC REACTIONS (3)

A systematic treatment of organic reactions including where applicable some theoretical basis for the nature of the reaction. The uses of these reactions in organic synthesis will be stressed. Prerequisite: CHM 541, its equivalent or consent of instructor. 2 lect.

545 ORGANIC PREPARATIONS (3)

An advanced laboratory course in the synthesis, isolation, and characterization of organic compounds with emphasis on recent advances and techniques. Prerequisite: CHM 213, its equivalent or consent of instructor.

550 ATOMIC AND MOLECULAR STRUCTURE (3)

The structures of atoms, molecules, and crystals are interpreted in terms of the results of the valence bond, molecular orbital, and crystal field theories. Prerequisite: CHM 413, its equivalent or consent of instructor. 2 lect.

551 CHEMICAL KINETICS (3)

Characterization of simple kinetic systems, experimental methods, energy distributions in molecules, the transition state method, chain reactions, reactions in solution. Prerequisite: CHM 413, its equivalent or consent of instructor. 2 lect.

552 THERMODYNAMICS (3)

Chemical thermodynamics, fundamentals; first, second and third laws; applications to solutions. Prerequisite: CHM 413, its equivalent or consent of instructor. 2 lect.

620 RADIOCHEMISTRY (3)

A course in nuclear structure, radioactivity, nuclear reactions, and the application of radioactive isotopes to chemical problems. Prerequisite: CHM 413, its equivalent or consent of instructor. 2 lect.

625 SELECTED TOPICS IN INORGANIC CHEMISTRY (3)

A quarter course on a selected topic in the field of inorganic chemistry, such as the reactions of substances in non-aqueous solvents, metal chelate compounds, inorganic reaction mechanisms, ligand field theory, or the chemistry of the lanthanides and actinides. Prerequisite: consent of instructor. 2 lect. May be repeated for credit with consent of adviser.

630 NUCLEAR AND ELECTRON MAGNETIC RESONANCE SPECTROSCOPY (3)

An examination of the theories and practices of N.M.R. and E.P.R. including examples of their applications to structural and kinetic studies of both organic and inorganic molecules. Prerequisite: consent of instructor. 2 lect.

640 THEORETICAL ORGANIC CHEMISTRY (3)

An advanced treatment of the influence of structure on the properties of organic molecules. Prerequisite: CHM 540, its equivalent or consent of instructor. 2 lect.

641 STEREOCHEMISTRY (3)

A detailed study of the geometries of organic compounds, with particular emphasis on the classification and reactions of optical and conformational isomers. Prerequisite: CHM 540, its equivalent or consent of instructor. 2 lect.

642 ORGANIC CHEMISTRY OF HIGH POLYMERS (3)

The chemistry and properties of high polymers including the organic chemistry of their preparation and the kinetics of polymerization. Prerequisite: CHM 540, its equivalent or consent of instructor. 2 lect.

645 SELECTED TOPICS IN ORGANIC CHEMISTRY (3)

A quarter course on a selected topic in the field of organic chemistry, such as organic spectroscopy, heterocyclic chemistry, organometallic chemistry, the chemistry of natural products. Prerequisite: consent of instructor. 2 lect. May be repeated for credit with consent of adviser.

650 QUANTUM CHEMISTRY (3)

Principles and applications of quantum theory to chemical problems. Electronic structure of molecules and its correlation with the chemical and physical properties of substances. Emission and absorption of radiation. Prerequisite: CHM 550, its equivalent or consent of instructor. 2 lect.

651 STATISTICAL THERMODYNAMICS (3)

Definition of partition function; translational, rotational, vibrational, and electronic partition functions and their calculation and application to thermodynamic problems. Calculation of thermodynamic functions from spectroscopic information. Prerequisite: CHM 552, its equivalent or consent of instructor. 2 lect.

652 THEORY OF SOLUTIONS (3)

Survey of modern theories of solutions and the liquid state. Prerequisite: CHM 552. 2 lect.

653 GROUP THEORY (3)

An introduction to group theory stressing its application in the areas of hybridization schemes, molecular orbitals, ligand field theory, and spectroscopy. Prerequisite: CHM 550, its equivalent or consent of instructor. 2 lect.

655 SELECTED TOPICS IN PHYSICAL CHEMISTRY (3)

A selected topic in the field physical chemistry such as molecular spectroscopy, advanced molecular structure, magnetic resonance, X-rays and crystal structure, statistical mechanics, precision physical-chemical measurements. Prerequisite: consent of instructor 2 lect. May be repeated for credit with consent of adviser.

600 SEMINAR (1)

Weekly discussions of recent topics and problems in chemistry.

699 RESEARCH (2-18)

Research for the master's degree thesis. Prerequisite: consent of instructor.

CLASSICS (CLS)

Associate Professor Piediscalzi (Administrative Chairman); *Assistant Professor* C. King; *Instructors* Claudy, W. King (Academic Chairman).

CLASSICAL HUMANITIES

11, 12, 13 (11, 12) CLASSICAL HUMANITIES (3)

(11) The Heroic and Archaic ages in Greece: Homer, lyric poets, Herodotus, and the tragedians. (12) The Sophistic age in Greece; Hellenistic philosophy and drama; Thucydides, Aristophanes, Plato, Lucretius, Menander, Plautus, and Terence. (13) Hellenistic and Roman history and poetry: Roman satire: Sallust, Livy, Plutarch, Tacitus, Cicero, Apollonius, Virgil, lyric poets, Petronius, and Juvenal.

311, 312 GREEK AND ROMAN DRAMA (3)

(311) The tragedies of Aeschylus and Sophocles. (312) Selected tragedies of Euripides and Seneca; selected comedies of Aristophanes, Plautus, and Terence.

321 GREEK AND ROMAN EPIC (3)

Homer's *Iliad* and *Odyssey* and Virgil's *Aeneid*.

331 GREEK AND ROMAN LITERARY CRITICISM (3)

Search for a theory of values in creative literature and a standard of excellence. Reading and discussion of the great critics of Greece and Rome, including Plato, Aristotle, Cicero, Horace, Quintilian, Dionysius, Longinus, and others. The influence of ancient criticism on English and European criticism.

471-472 (470) LINGUISTICS (2)

See LI 471-472.

GREEK LANGUAGE AND LITERATURE

101-102-103 (101, 102) BEGINNER'S COURSE (4)

Essentials of the Greek language, with selections from Xenophon's *Anabasis*.

201-202-203 (201, 202) INTERMEDIATE GREEK (3)

Xenophon's *Hellenica* and *Memorabilia* (selections); Plato's *Apology* and *Crito*.

301, 302, 303 (301, 302) ADVANCED GREEK (3)

(301) Euripides: reading of at least one complete play. (302) Homer: selected books of the *Iliad* or *Odyssey*. (303) Herodotus: selections.

481, 482, 483 INDEPENDENT READING (3)

LATIN LANGUAGE AND LITERATURE

101-102-103 (101, 102) BEGINNER'S COURSE (4)

Rapid survey of essentials of the Latin language.

201-202-203 (201-202) REPRESENTATIVE PROSE AUTHORS (3)

Review of essentials and reading for comprehension in Cicero's philosophical essays.

301, 302, 303 (301-302) VIRGIL (3)

The *Aeneid*, and selections from the *Bucolics* and *Georgics*. Study of the epic as a literary type of Virgil's relation to the Augustan Age.

305, 306, 307 (305-306) ROMAN POETRY (3)

Selections from the works of Catullus, Lucretius, Horace, Tibullus, Propertius, Ovid. Study of verse forms and sources and of the lives and influence of the various poets.

401, 402, 403 (401-402) LATIN LITERATURE OF THE SILVER AGE (3)

(401) Selected epigrams of Martial and selected letters of Pliny. Development of the epigram. Examination of sources for Roman private life. (402) Rhetoric and its influences on Silver Latin: selections from Quintilian, the two Senecas, Lucan. (403) The Later Epic: Valerius Flaccus and Lucan. Silver age mythological and historical epic. Readings in translation of Statius and Silius Italicus.

481, 482, 483 INDEPENDENT READING (3)



ECONOMICS (EC)

Professor Anon (Chairman); Associate Professors Blake, Burress, Chao, Treacy; Assistant Professors Carter, Cordrey, Frueh.

11-12-13 PRINCIPLES OF ECONOMICS (3)

Fundamental economic principles as an aid in understanding modern society. EC 11: Institutional economics, EC 12: Micro economics, EC 13: Macro economics. Prerequisite: sophomore standing or consent of instructor.

103 EVOLUTION OF AMERICAN INDUSTRIAL SOCIETY (3)

Survey of the forces influencing the early economic development of America. Development of economic institutions in the United States.

ADVANCED COURSES

Prerequisite for advanced courses: EC 11-12-13. For graduate credit, 11-12-13 or 621-622.

301 MONEY AND BANKING (3)

Analysis of the behavior and significance of money, credit, debt, and the banking system.

315 (415) INTERMEDIATE PRICE THEORY (4)

Examination of the general principles and analytical tools of micro-economic analysis.

316 (321) INSTITUTIONAL ECONOMICS (4)

Economics of the American economy in its institutional forms and economic theory analyzed to comprehend the nature and problems of economic life and thought today.

317 (417) INTERMEDIATE NATIONAL INCOME ANALYSIS (4)

An examination of the macro-economic variables in determining the national income, employment, and the price level.

321 EUROPEAN ECONOMIC HISTORY (3)

A survey of European economic history from ancient to modern times. Evolution of capitalism. Interrelationships between economic, political and social institutions.

340 (342) COMPARATIVE ECONOMIC SYSTEMS (4)

Chief characteristics of capitalism, communism, socialism, and fascism. By comparison, to clarify the economic process in a free-enterprise society.

351 LABOR ECONOMICS (4)

Labor history, theory, and management philosophy: structure of collective bargaining, and labor market analysis.

352 LABOR LEGISLATION (4)

Public policy with respect to protective and labor management legislation. Prerequisite: EC 351 or consent of instructor.

353 HISTORY OF THE AMERICAN LABOR MOVEMENT (4)

A history of the development of trade unionism in the United States. Prerequisite: EC 351 or consent of instructor.

360 (371) CURRENT ECONOMIC PROBLEMS (3)

Examination of selected economic problems of the present time. For non-majors only.

401 INTERMEDIATE MANAGERIAL ECONOMICS (3)

Role of economic analysis in management decision making.

402 (302) MONETARY THEORY (3)

The development of the theories of money, role of interest and monetary policy, and their relationship to national income, output, prices, and balance of payments.

409 (521) INTRODUCTION TO ECONOMETRICS (3)

An application of statistics to the testing of economic theory. Prerequisite: EC 315, 317, BUS 301, 302, 303.

410 (519) MATHEMATICAL ECONOMICS (3)

An application of mathematical tools in the formulation of economic theory. Prerequisite: EC 409.

412 (512) ECONOMIC ANALYSIS AND FORECASTING OF BUSINESS CYCLES (3)

Techniques and theories used in forecasting the business cycle. Prerequisite: EC 317 or consent of instructor.

421 THE HISTORY OF ECONOMIC THOUGHT I (4)

Writers from Adam Smith to Alfred Marshall.

422 THE HISTORY OF ECONOMIC THOUGHT II (4)

Twentieth-century writers.

431 FEDERAL PUBLIC FINANCE AND TAXATION (4)

Problems and principles of federal public finance and taxation.

432 STATE AND LOCAL PUBLIC FINANCE AND TAXATION (4)

Problems and principles of state and local public finance taxation. Prerequisite: EC 431 or consent of instructor.

441 INTERNATIONAL ECONOMICS I (4)

The economic basis of international trade; the nature and mechanism of international payments.

442 INTERNATIONAL ECONOMICS II (4)

International economic policies and problems. Prerequisite: EC 441 or consent of instructor.

444 ECONOMICS OF DEVELOPMENT (4)

Theoretical and empirical analysis of cultural change and industrial development; emphasis on emerging economies.

447 ECONOMIC DEVELOPMENT: CHINA (3)

An analysis of current economic development of China and its repercussion in international economic activities. Prerequisite: EC 444 or consent of instructor.

448 ECONOMIC DEVELOPMENT: TROPICAL AFRICA (3)

Cultural, economic, and social changes in the emergent countries of tropical Africa. Prerequisite: EC 444 or consent of instructor.

454 ECONOMICS OF COLLECTIVE BARGAINING (4)

Development of collective bargaining in the United States; economic cost of labor-management relations. Prerequisite: EC 351 or approval of instructor.

477 ECONOMIC STUDIES (3)

An examination of special economic issues. Prerequisite: consent of instructor.

481, 482, 483 INDEPENDENT READING (1-4)

Prerequisite: consent of instructor.

491 SEMINAR IN MONETARY THEORY (3)

An analysis of current developments in monetary theory. Prerequisite: EC 301, 402, or consent of instructor.

492 SEMINAR IN ECONOMETRICS (3)

Examination of current developments in econometrics. Prerequisite: EC 409, 410, or consent of instructor.

493 SEMINAR IN ECONOMIC HISTORY (3)

Selected topics in economic history. Prerequisite: EC 321 or consent of instructor.

494 SEMINAR IN PUBLIC FINANCE (3)

Selected topics in public finance. Prerequisite: EC 431, 432 or consent of instructor.

495 SEMINAR IN INTERNATIONAL ECONOMICS (3)

Selected topics in international economics. Prerequisite: EC 441, 442 or consent of instructor.

496 SEMINAR IN LABOR ECONOMICS (3)

Manpower economics and other selected topics. Prerequisite: EC 351, 454 or consent of instructor.

GRADUATE COURSES

501 (631) MANAGERIAL ECONOMICS (3)

Application of economic tools to management decision-making.

502 (302) MONETARY THEORY (3)

Selected topics in monetary theory.

509 (521) INTRODUCTION TO ECONOMETRICS (3)

An application of statistics to the testing of economic theory. Prerequisite: EC 515, 517, BUS 301, 302, 303 or 621.

510 (519) INTRODUCTION TO MATHEMATICAL ECONOMICS (3)

An application of mathematical tools in the formulation of economic theory. Prerequisite: EC 509.

512 ECONOMIC ANALYSIS AND FORECASTING OF BUSINESS CYCLES (3)

Theories and forecasting the business cycle.

515 ADVANCED PRICE THEORY (3)

Examination of the general principles and analytical tools of micro-economic analysis at a graduate level.

516 INSTITUTIONAL ECONOMICS (3)

Selected topics in institutional economics.

517 ADVANCED NATIONAL INCOME ANALYSIS (3)

Examination of the general principles and analytic tools of macro-economic analysis at a graduate level.

521 (421) HISTORY OF ECONOMIC THOUGHT I (3)

Writers from Adam Smith to Alfred Marshall.

522 (422) HISTORY OF ECONOMIC THOUGHT II (3)

Twentieth century writers.

531 (431) FEDERAL PUBLIC FINANCE AND TAXATION (3)

Problems and principles of federal public finance and taxation.

532 (432) STATE AND LOCAL PUBLIC FINANCE AND TAXATION (3)

Problems and principles of state and local public finance taxation. Prerequisite: EC 531 or consent of instructor.

540 (342) COMPARATIVE ECONOMIC SYSTEMS (3)

Chief characteristics of capitalism, communism, socialism, and fascism. By comparison to clarify the economic process in a free-enterprise society.

541 (441) INTERNATIONAL ECONOMICS I (3)

The economic basis of international trade; the nature and mechanism of international payments.

542 (442) INTERNATIONAL ECONOMICS II (3)

International economic policies and problems. Prerequisite: EC 541 or consent of instructor.

544 ECONOMICS OF DEVELOPMENT (3)

Theoretical and empirical analysis of cultural changes and industrial development; emphasis on emerging economies.

551 (351) LABOR ECONOMICS (3)

Labor history, theory, and management philosophy; structure of collective bargaining, and labor market analysis.

554 ECONOMICS OF COLLECTIVE BARGAINING (3)

Development of collective bargaining in the United States; economic cost of labor-management relations. Prerequisite: EC 551 or consent of instructor.

577 ECONOMIC STUDIES (3)

An examination of special issues. Prerequisite: consent of instructor.

601 SEMINAR IN MONETARY THEORY (3)

Prerequisite: EC 502 or consent of instructor.

602 SEMINAR IN ECONOMETRICS (3)

Selected topics in econometrics. Prerequisite: EC 509, 510 or consent of instructor.

603 SEMINAR IN ECONOMIC HISTORY (3)

Selected topics in economic history. Prerequisite: EC 321 or consent of instructor.

604 SEMINAR IN PUBLIC FINANCE (3)

Selected topics in public finance. Prerequisite: EC 531, 532 or consent of instructor.

605 SEMINAR IN INTERNATIONAL ECONOMICS (3)

Selected topics in international economics. Prerequisite: EC 541, 542 or consent of instructor.

606 SEMINAR IN LABOR ECONOMICS (3)

Manpower economics and other selected topics. Prerequisite: EC 551, 554 or consent of instructor.

611-612-613 GRADUATE SURVEY, PRINCIPLES OF ECONOMICS FOR TEACHERS (3)

Basic economic principles for teachers with some background in the social sciences, but without previous instruction in economics. Prerequisite: for 612 or 613: EC 611 and 612 or consent of instructor.

614, 615, 616 ECONOMIC STUDIES FOR TEACHERS (3)

Selected economic topics for teachers. Prerequisite: EC 611, 612, 613 or equivalent.

621-622 GRADUATE SURVEY IN PRINCIPLES OF ECONOMICS (3)

681, 682, 683 RESEARCH IN ECONOMICS (1-3)

Intensive reading or research in selected fields of advanced economics. Prerequisite: graduate standing and consent of instructor.

EDUCATION (ED)

Professors Harbage, Marquis (Dean), Milheim, Silverman, Zwetschke; *Associate Professors* Bireley, Chait, Clark, Hoehn, Huckins, Iddings, Wade; *Assistant Professors* Apt, Dillehay, Earl, Graham, Lyon, Tilton, Uphoff; *Instructors* Ballagh, Ellison, Fabric, Gadell, King, Koch, Meadows, Richards.

201, 202, 203 (201, 202) EDUCATIONAL PSYCHOLOGY (3)

Psychological principles with emphasis on their application to teaching. ED 201 is not open to students who have had PSY 11-12. Prerequisite for 202: 201 or PSY 11-12 or equivalent. Prerequisite for 203: ED 202 or consent of instructor.

241, 242, 243 (181-182) PHYSICAL SCIENCE (4) 241 F, 242 W, 243 Sp

Content of the physical sciences integrated to promote understanding of and intelligent interaction with physical aspects of environment. 2 rec. 1 lab. Prerequisite for 242: 241 or consent of instructor. Prerequisite for 243: 242 or consent of instructor.

311 (317) ELEMENTARY SCHOOL SCIENCE: CURRICULUM AND MATERIALS (3)

A study of basic principles, methods, curriculum trends, and material; individual laboratory work. Prerequisite: ED 203 or equivalent and at least nine credit hours in science or consent of instructor.

315, 316, 317 (215-216) ELEMENTARY SCHOOL LANGUAGE ARTS: CURRICULUM AND MATERIALS (3) F, W, Sp

Language and communication in the elementary school, including practices and materials used in guiding the listening, speaking, reading, writing, and related skill experiences of

children. Recommended that these be taken in sequence. If necessary, 315 emphasizing listening and speaking and 316 emphasizing written communication may be taken concurrently. 315 and 316 are prerequisite for 317 which emphasizes reading. Prerequisite: ED 203 or equivalent. (Participation experiences expected during enrollment in these courses.)

318 ELEMENTARY SCHOOL MATHEMATICS: CURRICULUM AND MATERIALS

(3) F, W, Sp

Instructional materials and methods of meaningful explanations of mathematics in the elementary school based upon structural properties of number and numeration system studies at this level. This course is required of all students preparing to teach in the elementary school. Prerequisite: ED 203, or equivalent and MTH 142. (Participation experiences expected during enrollment in course.)

327 SPEECH AND HEARING THERAPY IN THE PUBLIC SCHOOLS (4)

Therapeutic principles and procedures; problems in organization for public school speech and hearing therapy. Prerequisite: ED 203 or equivalent.

332 SECONDARY SCHOOL ENGLISH: CURRICULUM AND MATERIALS (3) W, Sp

Curriculum, methods, and materials for the language arts in the secondary school; current trends in the teaching of English. Prerequisite: ED 203 or equivalent, junior standing, and 22 hours in the teaching field. (Participation experiences expected during enrollment in course.)

333 SECONDARY SPEECH AND DRAMA: CURRICULUM AND MATERIALS (3) W

A curriculum and materials course for those preparing to teach speech and drama in secondary schools: curriculum, teaching methods, class organization, producing plays, and co-curricular activities. Prerequisite: ED 203 or equivalent, junior standing, and 24 credit hours in the teaching field with at least 9 hours at the 300 level or above. (Participation experience expected during enrollment in course.)

334 MODERN FOREIGN LANGUAGES: CURRICULUM AND MATERIALS (3) W

The modern-language curriculum in the public schools; purposes; methods; materials. Prerequisite: ED 203 or equivalent; the 203 course in the language field; and junior standing, or consent of instructor. (Participation experiences expected during enrollment in course.)

338 SECONDARY SCHOOL MATHEMATICS: CURRICULUM AND MATERIALS (3) W

Curriculum, methods, and materials in the mathematics of grades 7-12. Prerequisite: ED 203 or equivalent and at least a minor in mathematics. (Participation experiences expected during enrollment in this course.)

Courses having numbers of 400 or above require junior or senior standing in education. Courses having an asterisk (*) with the number offer graduate credit to students who meet the requirements of the Graduate Division. Certain courses may have additional prerequisites.

402* HISTORY OF EDUCATION (4)

Origin and development of education thought and institution in western civilization.

403* (433) CHILD DEVELOPMENT (4) F, W, Sp

Factors which influence growth and development. Prerequisite: ED 203 or equivalent.

404* (434) ADOLESCENT DEVELOPMENT (3)

An examination of the period in the sequence of development known as adolescence; with particular attention given to physical development and its psychological and social concomitants and to the effect upon the adolescent of social forces, especially schools. Prerequisite: ED 203 or equivalent.

411* (372) EARLY CHILDHOOD EDUCATION (4) W

Nursery, kindergarten, and primary schools in relation to contemporary life to develop appreciation of present-day procedure. Prerequisite: ED 203 or equivalent. (Participation experiences expected during enrollment in this course.)

412* (415) KINDERGARTEN: CURRICULUM AND MATERIALS (4) F

Materials and methods. Prerequisite: ED 203 or equivalent. (Participation experiences expected during enrollment in this course.)

415* (459) ADVANCED READING INSTRUCTION (3-4) W

Intensive study of selected problems in the improvement of reading. For teachers, administrators, and supervisors.

416* (405) ADVANCED SCIENCE FOR THE ELEMENTARY TEACHER (4) Su

Consideration of selected scientific principles which have particular application in the elementary school. Inquiry through a laboratory approach is emphasized. Prerequisite: BIO 11-12-13; ED 241, 242, 243 or equivalent; or consent of instructor.

417* ELEMENTARY SCHOOL SOCIAL STUDIES: CURRICULUM AND MATERIALS (4)
F, W, Sp

Objectives, principles, and trends in elementary social studies education. Prerequisite: ED 203 or equivalent.

418* (414) ADVANCED MATHEMATICS INSTRUCTION IN THE ELEMENTARY SCHOOL (4)

For teachers or supervisors who desire study in improvement of instruction. Prerequisite: ED 203 or equivalent.

419 SUPERVISED TEACHING, ELEMENTARY (12-15) F, W, Sp

Student teachers are assigned to a public school full-time. They work under the direct supervision of an experienced classroom teacher. In the Fall, student teaching begins in September with the opening of the public schools and continues for approximately 15 weeks to the end of the Fall quarter. During the Winter and Spring quarters the period of student teaching corresponds with the respective academic quarter. A student may receive 15 credit hours for student teaching in the Fall and 12 credit hours for Winter and Spring quarters. There is no student teaching during the Summer. Formal application must be made through the office of the Director of Laboratory Experiences during the first two weeks of the quarter prior to student teaching. Concurrent enrollment in ED 422 or consent of the Director of Laboratory Experiences is required and constitutes a full load for the quarter. Prerequisite: 315, 316, 317, 318 or equivalent; 112 credit hours (at least 12 of which must have been taken at Wright State), participation experiences, and a 2.0 cumulative grade point average.

421* BOOKS AND THE EDUCATIONAL PROGRAM (3) Sp

The selection and use of literary and informational books (trade not text) in the educational program.

422 EDUCATIONAL ORGANIZATIONAL (3) F, W, Sp

Local, state, and national school organization; legal provisions concerning teachers; professional associations. To be taken concurrently with ED 419 or 429; or consent of instructor.

423* BLACK URBAN CULTURE (3)

To familiarize inner city educators, students preparing for urban teaching, and departmental majors with the cultural uniqueness of the Black American living in urban centers.

426* OUTDOOR EDUCATION (3)

A course designed to provide teachers and leaders seeking skills in the use of the out-of-doors as a resource for program or curriculum enrichment with laboratory experiences and field work in a variety of biotic communities emphasizing the ecological relationships.

429 SUPERVISED TEACHING, SECONDARY (12-15) F, W, Sp

Same as ED 419 except applied to secondary level and to practical arts. Prerequisite: appropriate curriculum and materials course; 112 credit hours (at least 12 of which must have been taken at Wright State and will normally include work in both an academic major and in professional education); participation experiences; a 2.0 cumulative grade point average; and a 2.25 cumulative average in the teaching field.

431* (339, 431) SECONDARY SCHOOL SCIENCE: CURRICULUM AND MATERIALS (3) W

Curriculum and materials for teaching science with special emphasis on objectives, evaluation, planning, resources and facilities, and curricular trends in science education. Prerequisite: at least a minor in science teaching field and ED 203 or equivalent. (Participation experience expected during enrollment in course).

433* INTRODUCTION TO BUSINESS AND DISTRIBUTIVE EDUCATION (2) F

A survey course designed to acquaint the student with business and distributive education philosophy, objectives, and curricula on the secondary and post-secondary levels of instruction. Prerequisite: ED 203 or equivalent; at least a minor in business or distributive education; and junior or senior standing.

434*, 435*, 436*, 437*, 438* BUSINESS EDUCATION: CURRICULUM AND MATERIALS (1 each) 434 F, 435, 436, 437, 438 W

(434 Typing; (435) Shorthand; (436) Social Business; (437) Accountancy; (438) Marketing. Prerequisite: at least a minor in the field; ED 433 or concurrent registration; and ED 203 or equivalent.

439* SECONDARY SCHOOL SOCIAL STUDIES: CURRICULUM AND MATERIALS (3-4) W

Objectives, principles, and trends in secondary social studies education. Prerequisite: at least a minor in the field and ED 203 or equivalent. (Participation experience expected during enrollment in course).

440 SENIOR SEMINAR IN EDUCATION (4) F, W, Sp

Curriculum trends in the modern schools, developing a philosophy of education. Prerequisite: ED 419 or 429.

441* (457) EDUCATION OF SLOW LEARNERS (4) F, W

Psychology of mentally retarded children; methods and materials appropriate for teaching them. Prerequisite: ED 203 or equivalent.

442* (473) CURRICULUM DEVELOPMENT FOR SLOW LEARNERS (4) F, Sp

Practices and procedures used in developing school programs; techniques and methods used in the development of modern life-problem centered curriculum, utilizing social studies and arithmetic in the implementation of the curriculum. Prerequisite: ED 441. (Participation experience expected during enrollment in course).

443* (474) SKILL SUBJECTS FOR SLOW LEARNERS (4) W

Place of language arts in the curriculum; teaching problems, processes, methods, and techniques used to teach skill subjects at various levels of the special class program. Prerequisite: ED 441. (Participation experience expected during enrollment in course).

444* (475) MATERIALS FOR SLOW LEARNERS (4) W

Techniques in the preparation, selection, and adaptation of instructional materials for slow learners; sources of materials, application, and demonstration at various levels of the special class program. Prerequisite: ED 441. (Participation experience expected during enrollment in course.)

445* (476) OCCUPATIONAL TRAINING FOR SLOW LEARNERS (4) Sp

Role of occupational training in the curriculum; relationships with the world of work; problems of organizing and administering; methods and techniques used in developing occupational interests and abilities at various levels. Prerequisite: ED 441.

446* (445) PRINCIPLES OF TEACHING THE BASIC SKILLS (4)

Findings of modern research that bear on learning and teaching basic skills. Prerequisite: 18 credit hours in education.

447* TEACHING IN THE PUBLIC SCHOOL (4)

Study, observation, and evaluation of practices. Offered only to students who have completed the pertinent curriculum and materials course and are seeking a waiver of all or part of student teaching on the basis of full-time teaching experience.

449* AUDIO-VISUAL MATERIALS AND METHODS (3-4) W

Role of visual and auditory instruction; the psychology of and educational principles pertinent to such instruction. Prerequisite: curriculum and materials course or courses.

450* (451, 452, 453) MINOR PROBLEMS (1-9; max. 3 in any one term) F, W, Sp

Conference course. Prerequisites: senior or graduate standing in education and written consent of Dean of Education prior to registration.

461* PRINCIPLES OF GUIDANCE (3) F, W, Sp

Emphasizes the student's understanding of his personal frame of reference with respect to guidance and counseling principles and services. Social, psychological and philosophical influences are considered. Prerequisite: senior or graduate status in education.

462* PUPIL'S PERSONALITY PROBLEMS (3) W

Applies personality and developmental theories, perspectives in mental health, and family and school environmental influences toward the recognition and resolution of the problems of pupils. Prerequisite: senior or graduate standing in education or consent of the instructor.

463* (471) MENTAL HEALTH (3)

Factors influencing the behavior of children and youth; methods which teachers may use in observing, analyzing, and improving pupil attitudes and behavior. Prerequisite: senior or graduate standing in education or consent of instructor.

464* EVALUATION (3-4) F, W, Sp

Evaluation of learning, including selected forms of measurement and interpretation of data: sociometric techniques, anecdotal records, and testing. Prerequisite: curriculum and materials course or permission of instructor.

476* (450) CURRENT ISSUES IN READING INSTRUCTION (1-2; max. of 5)

Conference course on emerging issues. Prerequisite: education psychology and ED 317 or equivalent.

478* (458) WORKSHOP IN COMMUNITY RESOURCES (9)

Techniques for survey of community resources; ways and means of utilizing these resources in class instruction. Prerequisite: a teaching certificate.

Courses having numbers of 500 or above are primarily graduate courses and require graduate standing in education. Certain courses may require additional prerequisites. In special cases, with permission of the dean, a senior may elect a 500 level course.

501* ADVANCED EDUCATIONAL PSYCHOLOGY (4) F, W, Sp

An advanced course intended to prepare the student to evaluate critically existing educational practices and to innovate sound, new practices in the light of some of the theoretical and empirical findings of psychology.

502* (525) SOCIAL FOUNDATIONS OF EDUCATION (4) W

Relation between public education in a democracy and the basic social trends of industrial civilization.

503* (401) PHILOSOPHY OF EDUCATION (4) F, Sp

Function of education in American society; educational objectives and how they are determined.

505* (531) CURRENT TENDENCIES IN EDUCATION (3) (May be repeated maximum of 12 hrs.)

A consideration of current trends and theories in education, and the development of criteria and procedures for their evaluation and implementation.

512* (411) ELEMENTARY SCHOOL CURRICULUM (4) F

Construction, theories, and techniques; curriculum research.

516* (571) EDUCATIONAL INVESTIGATIONS IN READING AND LANGUAGES (3-6; may be repeated once; max. 6)

Summary of scientific studies. For teacher, principals, and supervisors.

518* TEACHING AND SUPERVISION OF ELEMENTARY SCHOOL MATHEMATICS (3)

Trends in content and methods.

523* FAMILY FINANCIAL SECURITY (3)

Financial problems of the family: credit and borrowing, life and other forms of insurance, real estate ownership, savings, and investment problems. Means of incorporating family financial security education in the secondary school curriculum. Prerequisite: graduate standing or consent of instructor.

527* CURRICULUM TRENDS IN THE BASIC BUSINESS SUBJECTS (3)

Recent developments in the teaching of basic business subjects and the development of appropriate teaching.

528* CURRICULUM AND MATERIALS IN ECONOMIC EDUCATION (3)

A critical analysis of the material available in economic education, the development of appropriate teaching units, and the application of special methods in the teaching of economics on the elementary, secondary and post-secondary levels of instruction.

529* CURRICULUM TRENDS IN BOOKKEEPING AND DATA PROCESSING (3)

An analysis of the curriculum in bookkeeping and data processing and the development of appropriate teaching units in this area.

530* CURRICULUM TRENDS IN THE TECHNICAL BUSINESS SUBJECTS (3) Sp

Trends, application of new teaching media, and the development of teaching units in type-writing, shorthand, transcription, office procedures, and office machines.

531* (512) THE HIGH SCHOOL CURRICULUM (4) F

Curriculum organization of the secondary school; social and psychological foundations; course of study improvements.

532* (521) THE JUNIOR HIGH SCHOOL (3) W

For teachers, administrators, and special service personnel in junior high schools. Overview of curriculum, organization, administration, and guidance programs appropriate to schools for this age group. Prerequisite: at least a provisional certificate.

533* (522) IMPROVEMENT OF TEACHING IN THE SECONDARY SCHOOL (4) Sp

Advanced course in principles and practices for improving instruction in the modern secondary school with special emphasis upon research findings relating to changing philosophies.

536* (546) IMPROVING READING IN THE SECONDARY SCHOOL (4)

Materials and purposes that aid in developing reading skills in both English and content area. Prerequisite: teaching experience.

538* SUPERVISION OF SECONDARY SCHOOL MATHEMATICS (3)

Trends in materials and methods. An original investigation. Prerequisite: at least a minor in the field of mathematics.

540* (532) DIAGNOSTIC AND REMEDIAL TEACHING (4)

Clinical and classroom aspects of learning retardations with emphasis on procedures, materials, and techniques. Prerequisite: ED 446 or teaching experience.

541* (503) CLINICAL PRACTICE IN EDUCATIONAL DISABILITY I: DIAGNOSIS (4)

Supervised experiences in defining the nature and treatment of specific cases of learning retardations. Prerequisite: ED 540 and consent of instructor.

542* (504) CLINICAL PRACTICE IN EDUCATIONAL DISABILITY II: TREATMENT (4)

Supervised experiences in teaching children who suffer from learning retardations. Prerequisite: ED 541 (may be taken concurrently with ED 541).

543* (513) SUPERVISION OF TEACHING (4) W

Principles, methods, and techniques of leadership in improving the educational programs of elementary and secondary schools.

545* (515) CURRICULUM DEVELOPMENT IN THE PUBLIC SCHOOL (4) Sp

General principles and practices of curriculum development; consideration of philosophy of curriculum change; aims of education; recommended curriculum reorganizations.

548* (547) ADMINISTRATION AND SUPERVISION OF THE AUDIO-VISUAL PROGRAM (4)

Qualifications and duties of the director: planning and administering the program, preparation of budget, buying equipment, handling materials, in-service training, and evaluation of the program. Prerequisite: ED 449, 543 or approval of the chairman of the department.

549* (469) DEVELOPING MATERIALS FOR CLASSROOM INSTRUCTION (4)

Advanced course in the development of a wide range of techniques and materials for the improvement of instruction. The student will use his understandings from ED 449 for developing and creating specific instructional materials for a particular class or grade level. Prerequisite: ED 449.

551* (567) EDUCATIONAL STATISTICS I (3) F, Sp

Descriptive statistics and linear correlation including computations for the evaluation of common measures and interpretation of test results.

552* (567) EDUCATIONAL STATISTICS II (3) W

An introduction to inferential statistics including: hypothesis testing, t-test, chi square, and analysis of variance; partial and multiple correlation; regression equations. Prerequisite: ED 551 or ED 464 or consent of instructor.

553* (568) EDUCATIONAL STATISTICS III (3)

Multivariate analysis including: analysis of variance, analysis of covariance, and factor analysis. Prerequisite: ED 552 or consent of instructor.

554* (551) RESEARCH DESIGN AND ANALYSIS (3-4) F, W, Sp

Critical study of research techniques and reporting methods. Prerequisite: ED 552 or consent of instructor.

555* RESEARCH PROJECTS (1-6)

Conference course. Individual research to satisfy requirements of research study for degree Master of Education. Prerequisite: ED 554.

556* INTRODUCTION TO EDUCATIONAL RESEARCH (3) F, Sp

Introduction to statistical terminology and research methodology. Not open to students who have taken ED 552 (Educational Statistics II). Prerequisite: ED 551 or ED 464.

561* PSYCHOMETRICS (3) F, W

Surveys psychological tests and measurement with particular emphasis upon standardized group tests of general ability, achievement, interest and personality. Understanding of basic principles and their application to counseling will be stressed. Not open to students who have had Psychology 433. Prerequisite: ED 461 and ED 551.

562* PROCESSES OF CAREER DEVELOPMENT (3)

Presents career development as a series of vocational-avocational choices in the process of self realization and considers the effect of rapid social and technological change upon this process. Prerequisite: ED 461.

563* THEORIES AND TECHNIQUES OF COUNSELING (3) W, Sp

Covers theories, principles and techniques that are basic to counseling function and practice. Individual and group counseling techniques are considered, as well as the counselor's role as a consultant. Prerequisite: ED 561.

564* (545) DEVELOPMENT AND UTILIZATION OF THE CASE STUDY (3)

Applies the case study approach as a technique and method for the analysis of counselee problems. Covers the counselor-counselee relationship, the counseling interview, tests and other diagnostic techniques as tools for studying, understanding, and planning treatment programs. Prerequisite: ED 461.

565* ORGANIZATION AND ADMINISTRATION OF GUIDANCE SERVICES (3) Sp

Presents theoretical aspects concerning the organization and administration of guidance services; practical application of principles to schools and other organizations. Prerequisite: ED 461.

566* OCCUPATIONAL AND EDUCATIONAL INFORMATION (3) F, W

Considers the development of an educational-occupational library for students; the classification of the world of work and its implications for vocational counselors; the evaluation of vocational and scholarship materials; the use of occupational data in career counseling. Prerequisite: ED 461.

567* GROUP PROCESSES IN COUNSELING AND GUIDANCE (3) F, W, Sp

Serves as an introduction to group counseling practice. Considers interaction patterns and dynamics within small groups, and understanding of individual and group behavior as it relates to the individuals within the course. Evaluation and research of group processes will also be considered. Prerequisite: ED 563.

568* COMMUNITY RESOURCES IN COUNSELING AND GUIDANCE (3)

Surveys social agencies, both public and private, with which counselors should be familiar. An analysis of the referral process and the methods of inter-agency cooperation. There will be actual on-the-site visitation. Voids in services and areas of unmet human needs will be outlined, and the methods of social action essential to changing old agencies and/or initiating new agencies and programs will be developed. Prerequisite: ED 461.

569* (559) GUIDANCE SERVICES IN THE ELEMENTARY SCHOOL (3) Sp

Stresses the functions of a guidance counselor and the development of guidance programs at the elementary school level. Specific aspects considered are job analysis, school and community involvement, priorities, methods, techniques, organization and goals. Prerequisite: ED 461.

570* (500) INDEPENDENT READING (1-3; max. 9) F, W, Sp

Planned reading in any field related to student's major graduate area under the guidance of a faculty member of the Division of Education. Prerequisite: regular standing in the Graduate School, nine hours graduate credit in education, and approval of the plan by the Director of Graduate Studies in Education.

581* SCHOOL BUILDING AND EQUIPMENT (4)

Building types; efficient use of buildings and equipment. Prerequisite: graduate standing in education.

582* SCHOOL LAW (4)

Statutes and judicial decisions related to legal authority; responsibilities of boards of education, teachers and administrators. Prerequisite: graduate standing in education.

591* SEMINAR IN SCHOOL ADMINISTRATION (1-4) Sp

Prerequisite: approval by the Director of Graduate Studies in Education.

592* THE SCHOOL ADMINISTRATOR'S PUBLIC RELATIONS (4)

Designed to assist superintendents and principals in their relations with the public.

593* SCHOOL FINANCE (4)

Guiding principles for developing adequate financial programs, detailed study of sources of revenue, local, state, and federal; procedures in management of school funds with reference to budgeting, accounting, and auditing.

596* ORGANIZATION AND ADMINISTRATION OF PUBLIC SCHOOLS (4-5) F

Principles of democratic school administration; management of teaching and non-teaching personnel; role of administration in facilitating teaching and learning; school-community relations.

597* THE ELEMENTARY SCHOOL PRINCIPALSHIP (3) W

Duties, problems, and roles of elementary school principals; relations with central administration, staff, students, and community.

598* (597) THE SECONDARY SCHOOL PRINCIPALSHIP (3) W

Duties, problems, and roles of secondary school principals; relations with central administration, staff, students, and community.

599* (598) SCHOOL SURVEYS (3-6; may be repeated once; max. 6)

601* (572) CURRENT ISSUES AND PROBLEMS IN EDUCATION (3)

Issues and problems in elementary and secondary education with special emphasis on changing needs, instructional patterns, and curricular organization.

602* (576) COMPARATIVE EDUCATION (3)

Intensive studies of education in selected countries.

610* (511) SEMINAR IN ELEMENTARY EDUCATION (3-6; may be repeated once; max. 6)
Individual and group study of problems in the field of elementary education.

640* (690) SEMINAR IN CURRICULUM AND SUPERVISION (3; max. 12)

Intensive study of a problem in curriculum and supervision. Prerequisite: master's degree or consent of instructor.

660* ADVANCED SEMINAR IN GUIDANCE (3-6; max. 12) Sp

Provides an opportunity for advanced students to work on problems of their own selection under faculty supervision. Prerequisite: ED 664 and instructor's consent.

664*-665* (564) PRACTICUM IN COUNSELING I (OR II) (3) F, W, Sp

Provides an experience in counseling and guidance in which the student actually counsels under supervision individuals in educational, vocational and personal areas. Prerequisite: ED 563 and permission of the instructor.

669* (569) STUDENT PERSONNEL ADMINISTRATION IN HIGHER EDUCATION (3)

Surveys student personnel services in colleges and universities. Consideration is given to the organization, administration and rationale of these services. Designed particularly for those students who have an interest in student personnel work at college level. Prerequisite: ED 461.

699* THESIS F, W, Sp

Research for thesis in education.

ENGINEERING (EGR)

Professors Jankowski (Chairman), Golding; *Assistant Professors* Hankins, Mann, Mofeez; *Instructors* Brandeberry and Swisher.

141, 142, 143 ENGINEERING DESIGN (3)

An introductory course emphasizing engineering design, graphical communication, visualization in three dimensions, and an introduction to computers. Must be taken in sequence.

ADVANCED COURSES

210 DIGITAL COMPUTER PROGRAMMING I (3)

Programming of digital computers using FORTRAN IV. Introduction to numerical analysis. Prerequisite: MTH 132.

211 DIGITAL COMPUTER PROGRAMMING II (3)

Continuation of EGR 210. Use of mass storage; subroutine library, in particular the scientific subroutine package; special debugging techniques. Prerequisite: EGR 210.

212 STATICS (4)

Resultants, equilibrium, trusses, frames, machines, centroids, friction, inertias. Prerequisite: PHY 140, concurrently with MTH 232.

213 DYNAMICS (5)

Kinematics of particles and rigid bodies. Kinetics of particles and rigid bodies. Work-energy for particles and rigid bodies. Lagrange's equations. Impulse-momentum for particles and rigid bodies. Prerequisite: EGR 212.

313 STRENGTH OF MATERIALS (5)

Axial and shear stresses and strains; torsion of circular shafts; shear and bending moment diagrams; deflection of beams; combined stresses; column theory. Prerequisite: EGR 212. 4 hrs. lect. 3 hrs. lab.

315 THERMODYNAMICS (4)

A study of classical thermodynamics with primary emphasis on the application of the first and second laws to thermodynamics systems. Introduction to physical and chemical equilibria. Prerequisite: PHY 142.

316 TRANSPORT SYSTEMS (3)

A macroscopic study of the fundamentals of systems which involve momentum, heat, and mass transfer with emphasis on the design equation. Prerequisite: EGR 315.

321,322 LINEAR SYSTEMS I, II (5) (5)

Linear, lumped-parameter, time-invariant physical systems; modeling of mechanical, electrical, fluid, and thermal systems; behavior of such systems is studied. System graphs and equation formulation. Analog computer solutions. Review of complex numbers. System excitation. Solution of differential equations. Transient and steady state response of linear systems. Generalized impedance. Equivalent networks. Laplace transform methods. Prerequisite: EGR 321; PHY 142, concurrently with MTH 233, EGR 213; EGR 322; EGR 321. EGR 321: 5 hrs. lect. EGR 322: 4 hrs. lect. 3 hrs. lab.

341 ELECTRONICS I (4)

The ideal diode; practical rectifiers; ideal amplifiers; basic vacuum triode amplifiers; practical triode amplifiers; incremental linear models for the vacuum triode; semiconductor physics; the basic transistor amplifier; practical transistor amplifier. Prerequisite: EGR 322. 3 hrs. lect. 3 hrs. lab.

345 ELECTROMAGNETICS (3)

Electrostatics and dielectrics. Magnetic fields; induced electromotive force; magnetic materials. Maxwell's equations and their physical interpretation and application. Plane waves in free space and in matter. Guided waves and radiation. Prerequisite: EGR 322, MTH 331, 333.

411 ADVANCED DYNAMICS (4)

Kinematics of a particle in three dimensions for various coordinate systems. Kinematics in a moving coordinate system. Dynamics of a particle and system of particles including work-energy and impulse-momentum. Kinematics of general rigid body motion. Principal axes of inertia. Eulerian angles. Dynamics of general rigid body motion. Lagrange's equations. Prerequisite: EGR 213.

421 COMMUNICATION THEORY (5)

Concepts of analyses of systems in the frequency domain: periodic signals are analyzed by Fourier series techniques, pulse signals are analyzed by Fourier transform methods. Signal representation theory and mean square error criterion. Impulse response, convolution, modulation, noise, and information theory concepts. Prerequisite: MTH 332, EGR 322.

423 ENERGY CONVERSION (4)

Energy transfer and conversion principles; electromechanical systems; transducers. Prerequisite: EGR 322, EGR 345.

425 CONTROL SYSTEMS I (4)

Introduction to control systems; review of the methods of writing differential equations; review of solution of differential equations, Laplace Transforms; block diagrams; transfer functions; basic servo characteristics; root locus; specialized pole-zero topics; frequency response. Prerequisite: EGR 322. 3 hrs. lect. 3 hrs. lab.

426* CONTROL SYSTEMS II (4)

Nyquist's stability criterion; feedback control system performance based on the frequency response; cascade compensation: root locus and frequency response plots; feedback compensation; complex control systems; A-C feedback control systems; analog computers. Prerequisite: EGR 425. 3 hrs. lect. 3 hrs. lab.

430* DISTRIBUTED SYSTEMS (3)

Distributed constants and traveling waves in various types of physical systems. A-C steady-state in distributed systems. Phase and group velocities. Reflections, standing wave ratios, and impedance matching techniques. Prerequisite: EGR 322, MTH 331, 332, 333. EGR 345 is suggested as a prerequisite but is not required.

441* ELECTRONICS II (4)

Review of some important topics on transistor; the operating point; equivalent circuits and their parameters; multigrid vacuum tubes; audio amplifiers; single stage amplifier design; multistage amplifiers; feedback; communication circuits and systems; pulse circuits. Prerequisite: EGR 341. 3 hrs. lect. 3 hrs. lab.

489 SENIOR PROBLEMS (3 or 5)

Solution of engineering problems under the guidance of an instructor. Prerequisite: senior standing.

499 SPECIAL PROBLEMS IN ENGINEERING (1-5)

Special problems in advanced engineering topics. Prerequisite: consent of instructor.

515* ADVANCED THERMODYNAMICS (3)

An extension of basic thermodynamic concepts: first law, second law, physical equilibrium, chemical equilibrium, and statistical thermodynamics. Prerequisite: EGR 315.

521* SYNTHESIS OF LINEAR SYSTEMS (3)

Positive real functions and their relation to physical realizability. Zero-pole structure of network impedance functions; properties and applications of frequency selective network; filter design by approximating functions. Prerequisite: EGR 322, 421, MTH 331, 332, 333.

524* LARGE SCALE SYSTEMS (3)

Operation research techniques; linear programming and the transportation problem. Game theory, graphs and network flows, dynamic programming, and other optimization techniques. Prerequisite: EGR 322. A course in linear algebra is recommended.

542* DIGITAL COMPUTER PRINCIPLES AND DESIGN (3)

Digital arithmetic; Boolean Algebra; minimization of Boolean function; logic circuits; switching circuits; digital computer elements; arithmetic and control units. Prerequisite: EGR 341 or equivalent.

590*-594* SPECIAL PROBLEMS (1-5)

Special problems in advanced engineering topics. Prerequisites: graduate standing and consent of instructor.

613* CONTINUUM MECHANICS (3)

Analysis of stress in a continuum; analysis of deformation in a continuum; basic physical laws of a continuous media; applications to solids; applications to fluids. Prerequisite: graduate standing.

621* RANDOM PROCESSES (3)

Probability and the description of random signals, correlation functions, power spectra, filtering, and an introduction to decision theory. Analysis and design of communications systems which process random signals. Prerequisite: a course in probability and statistics and graduate standing.

625* ADVANCED CONTROL THEORY (3)

Multivariable systems and the state variable formulation. Sensitivity studies and optimization techniques in control systems. Discrete and sampled-data systems. Prerequisite: EGR 426 or equivalent and graduate standing.

630* NONLINEAR SYSTEMS (3)

Nonlinear elements and their effects in physical systems. Numerical solutions. Phase plane methods, linearization techniques, describing functions, stability, and limit cycles. Prerequisite: graduate standing.

699* RESEARCH (1-9)

Research for thesis purposes only. Consent of adviser is required.

ENGLISH (ENG)

Professors Baker, Wetmore (Chairman); *Associate Professors* Babb, Bracher, Harden, Hussman; *Assistant Professors* C. Cary, N. Cary, Dean, Gleason, Pacernick; *Instructors* Correale, Grauman, Hughes, Listerman, MacKenzie, Suru, Tibbits, Whissen.

GENERAL COURSES

11-12-13 (11-12) COMPOSITION AND LITERATURE (3)

Designed to improve the student's skill in reading and writing through training in the techniques of effective expository writing and of critical reading and analysis of literary and non-literary materials. Required of all freshmen.

21, 22, 23 (21-22) INTRODUCTION TO EUROPEAN LITERATURE (3)

Representative works of European literature in translation from classical times to the present.

31, 32, 33 (31-32) INTRODUCTION TO ENGLISH LITERATURE (3)

Representative works of English literature from Chaucer to the present.

41, 42, 43 (41-42) INTRODUCTION TO AMERICAN LITERATURE (3)

Representative works of American literature from the beginnings to the present.

51, 52, 53 INTRODUCTION TO LITERATURE (3)

Critical reading of selected examples of the major literary forms to develop an appreciation and understanding of literature, its major forms, and some of its significant themes: (51) fiction, (52) poetry, (53) drama.

Note: The three courses in the four common curriculum literature sequences (ENG 21-22-23, 31-32-33, 41-42-43, and 51-52-53) may be taken in any order. Credit is granted for any course separately when it is not used to meet the common curriculum requirement.

160 (162) CHILDREN'S LITERATURE (4)

Critical reading of major works of children's literature aimed at developing an understanding of their intrinsic value and of the standards for judging children's literature.

Note: All general English courses at the 200 and 300 levels are open to sophomores who have completed the minimum prerequisite of ENG 11-12-13.

210 NEWSWRITING AND MEDIA (4)

Introduction to writing for the various news media and to their unique features; special attention to newspaper writing. Prerequisite: successful completion of ENG 11-12-13.

211 NEWS EDITING (4)

Introduction to newspaper make-up and design and to editing the news for the various media with special attention to newspaper editing. Prerequisite: ENG 210.

220 SHORT STORY WRITING (4)

Practice in the fundamental techniques of short story writing; special attention to the basic concerns of the serious beginning writer.

260 (231) ADVANCED COMPOSITION (4)

Practice in various types of expository writing; special attention to rhetorical and stylistic considerations and to such special writing problems as the creative essay and the professional article.

321 (325) CREATIVE WRITING (4)

Workshop for qualified students who wish to develop further their abilities in creative writing; special attention to the development of advanced techniques of writing the full-length short story.

322 (326) CREATIVE WRITING (4)

Workshop for highly qualified students who wish to continue their work in the short story, poetry, drama, and the novel. Prerequisites: ENG 220, 321, or the equivalent or the permission of the instructor.

331 BUSINESS WRITING (3)

Techniques in business writing with special attention to improving mechanical skills, reviewing the forms of business writing, acquiring research techniques, and analyzing business and technical prose.

340 SHORT FICTION (4)

The history and development of short fiction to the present; selected reading from American, English, and continental literatures.

341 MODERN DRAMA (4)

Study of representative examples of the modern drama drawn from American, English, and continental literatures.

342 (376) THE ENGLISH NOVEL (4)

The history and development of the English novel to the present day.

343 (375) THE AMERICAN NOVEL (4)

The history and development of the American novel to the present day.

344, 345 (371, 372) RUSSIAN LITERATURE (4)

The development of Russian literature since 1825: (344) special attention to Pushkin, Lermontov, Gogol, Ostrovski, Turgenev, and Dostoyevski; (345) special attention to Tolstoy, Chekhov, Andreyev, Gorky, Bunin, and Pasternak.

MAJOR COURSES

Successful completion of Freshman English is the minimum prerequisite for all major courses. Bachelor of Arts degree candidates earning an English major must meet the minimum major requirements from courses in this group. For majors ENG 250-251 is prerequisite to enrollment in other literature courses in this group. Major courses are open to non-majors as electives by permission of the English department.

250-251 INTRODUCTION TO THE STUDY OF LITERATURE (4)

Designed to introduce English majors to independent analytical reading, to the major literary forms, and to the scholarly and critical approaches to and basic vocabulary of literary study. (250) Fiction and non-fiction prose and the critical study of literature; (251) poetry and drama and the scholarly study of literature.

260 (231) ADVANCED COMPOSITION (4)

Practice in various types of expository writing; special attention to rhetorical and stylistic considerations and to such special writing problems as the creative essay and the professional article.

261 ADVANCED COMPOSITION FOR TEACHERS (4)

A workshop approach to the study of expository, descriptive, and narrative writing, with special attention to the problems of secondary school teachers of composition. Writing, reading, and evaluation of papers.

Note: ENG 250-251 is prerequisite for enrollment in ENG 351, 352, 353, 354, 355, or 356.

351 MAJOR ENGLISH WRITERS: CHAUCER TO SHAKESPEARE (4)

Representative works of major English writers of the medieval period and the Sixteenth Century, including Chaucer, the Pearl-poet, Ma'ory, Sidney, Spenser, Marlowe, and Shakespeare.

352 MAJOR ENGLISH WRITERS: DONNE TO FIELDING (4)

Representative works of major English writers of the Seventeenth and Eighteenth Centuries, including Donne, Jonson, Bacon, Milton, Dryden, Pope, Johnson, Congreve, Swift, and Fielding.

353 MAJOR ENGLISH WRITERS: BLAKE TO ARNOLD (4)

Representative works of major Romantic and Victorian writers, including Blake, Austen, Wordsworth, Coleridge, Keats, Carlyle, Dickens, Tennyson, Browning, and Arnold.

354 MAJOR ENGLISH WRITERS: HOPKINS TO ELIOT (4)

Representative works of major English writers of the modern period, including Hopkins, Hardy, Housman, Shaw, Conrad, Yeats, Joyce, Lawrence, Woolf, and Eliot.

355 MAJOR AMERICAN WRITERS: POE TO DICKINSON (4)

Representative works of major American writers of the Nineteenth Century, including Poe, Emerson, Thoreau, Hawthorne, Melville, Whitman, and Dickinson.

356 MAJOR AMERICAN WRITERS: TWAIN TO FAULKNER (4)

Representative works of major American writers of the late Nineteenth and Twentieth Centuries, including Twain, James, Robinson, Dreiser, Fitzgerald, O'Neill, Frost, Hemingway, and Faulkner.

361-362 INTRODUCTION TO THE ENGLISH LANGUAGE AND LINGUISTICS (3)

History of the English language; American English; background of modern English vocabulary; the linguistic approach to correctness and the standards of usage; grammar: the

traditional and modern views; structural linguistics and its application to teaching; the "new" English; phonetics; linguistic geography; types of language change; and principles of linguistic study.

Note: The series of "Studies" courses is intended to provide a wide range of courses approaching literature from a variety of significant viewpoints. Because a large number of courses can be offered under each "Studies" number, students should consult the department for a list and brief description of the particular courses that will be offered during a given academic year. Completion of at least three of the following courses is prerequisite to enrollment in the "Studies" courses: ENG 351, 352, 353, 354, 355, and 356.

410* STUDIES IN ENGLISH LITERARY HISTORY (4)

Courses offered under this number provide intensive study of English literature from the point of view of literary history and are intended to develop an understanding of the historical approach to literature and an ability to deal critically with historical generalizations about literary periods and movements.

420* STUDIES IN AMERICAN LITERARY HISTORY (4)

Courses offered under this number provide intensive study of American literature from the point of view of literary history and are intended to develop an understanding of the historical approach to literature and an ability to deal critically with historical generalizations about literary periods and movements.

430* STUDIES IN MAJOR ENGLISH WRITERS (4)

Courses offered under this number provide intensive study of the work of single, major English authors—such as Shakespeare, Chaucer, Milton, and others—and are intended to develop an understanding of individual works of literature in the context of an author's life and total literary production.

440* STUDIES IN MAJOR AMERICAN WRITERS (4)

Courses offered under this number provide intensive study of the work of single, major American authors—such as Melville, Whitman, James, and others—and are intended to develop an understanding of individual works of literature in the context of an author's life and total literary production.

450* STUDIES IN LITERARY TYPES AND MODES (4)

Courses offered under this number provide intensive study of important literary forms such as poetry, the novel, comedy, tragedy, satire, and the epic, and are intended to develop an understanding of the formal aspects of literature as approached theoretically, analytically, or historically.

460* STUDIES IN LITERARY THEMES (4)

Courses offered under this number provide intensive study of literary works in terms of significant and recurring literary themes as they can be traced in various eras, cultures, and literary traditions.

470 STUDIES IN LITERARY CRITICISM (4)

Courses offered under this number provide intensive study of the theoretical, practical, and historical aspects of literary criticism in order to develop an understanding of important critical questions and approaches.

480 STUDIES IN PHILOLOGY AND LINGUISTICS (4)

Courses offered under this number provide intensive study of the English language and linguistics and are intended to develop an understanding of the historical, comparative, and descriptive approaches to the study of language and of the nature and value of their findings.

490 STUDIES IN ENGLISH EDUCATION (4)

Courses offered under this number focus on the theoretical issues and practical problems of the teaching of English at all levels and are designed to meet the needs of teachers of literature, language, and composition.

491 DIRECTED READING (1-4)

Advanced readings in American, English or World Literature in translation normally not available through course structure. Superior academic record and permission of faculty director required.

FINE ARTS (FA)

Associate Professor Fenton (Music).

11-12-13 IDEAS IN WESTERN ART: VISUAL AND MUSICAL (3)

Development of concepts necessary for the analysis and appreciation of the great art of western civilization. 11—Music; 12—Painting; 13—Architecture. These courses are designed for students who are not majoring in fine arts and to satisfy a humanities requirement in the Common Curriculum. Although all three courses must be taken for full credit, they may be taken in any order.

FINANCE (FIN)

Associate Professors Dolphin (Chairman), Bacon; Assistant Professor Gray.

103 PERSONAL FINANCE (3)

Management of personal income with emphasis on family financial planning, including budgeting, income taxes, types of insurance, and forms of investment. Open to all non-business majors and to freshmen and sophomores majoring in business administration.

301 INTRODUCTION TO BUSINESS FINANCE (3)

The organization and financing of business enterprises. Emphasis on sources of funds, working capital, management, and financial analysis. Prerequisite: EC 11-12-13, ACC 201-202-203.

302 FINANCIAL MANAGEMENT (3)

The organization and financing of business enterprises, continued. Emphasis on uses of funds including consideration of capital budgeting and cost of capital, valuation, merger, and reorganization. Prerequisite: FIN 301.

303 CASE PROBLEMS IN FINANCE (3)

Emphasis is placed upon financial management of the industrial corporation. Case problems in cash flow, budgeting, capital expenditure, expansion, and financial analysis. Prerequisite: FIN 301, 302.

305 PERSONAL FINANCIAL PLANNING (3)

Course designed for non-business majors concerned with financial problems encountered in managing individual affairs; family budgeting, installment buying, insurance, home ownership, and investing in securities. No prerequisite. (No credit for juniors and seniors in the Division of Business Administration.)

ADVANCED COURSES

Note: In addition to courses specified, ACC 201-202-203 or 621-622, and EC 11-12-13 or 621-622 are prerequisite for all courses.

351 PRINCIPLES OF INSURANCE (3)

Principles underlying all insurance-risk bearing and the theory of probability. General analysis of the principle types of commercial insurance—life, fire, casualty, marine suretyship, and others.

401 INVESTMENT MANAGEMENT (3)

Policy decision-making in the management of an investment portfolio. Discussion of types of securities and grading into risk classes. Emphasis on types of investment policy and supervision of a securities portfolio. Prerequisite: EC 301 and FIN 301, 302.

402 (441) SECURITY ANALYSIS (3)

Principles and methods of security analysis. Methods of evaluating current business outlook; financial analysis of individual securities including analysis of stocks; analysis of bonds, preferred stock, and convertible securities. Prerequisite: FIN 401 and ACC 302, 303.

411 (408) FINANCIAL INSTITUTIONS (3)

Identification and analysis of problems of management, organization, capital structures, and credit analysis of commercial banks, savings and loan associations, life insurance companies, sales finance companies, and investment banking with opportunity for students

to accomplish special research in area of choice. Prerequisite: FIN 301, 302 or 621 and EC 301.

412 COMMERCIAL BANKING (3)

Problems of commercial banking discussed from point of view of bank management; determination of proper size of asset reserves; credit analysis required for various kinds of bank loans; investment policies for commercial banks; problems of equity reserves and capital account. Prerequisite: EC 301 and FIN 301, 302.

431 REAL ESTATE (4)

Types of interest in real estate. Principles of leasing, purchasing, selling, valuation, financing, property management, construction, and development of individual and business real estate property. State and federal regulation. Prerequisite: FIN 301, 302 and three advanced credit hours of business administration.

452 PRINCIPLES OF LIFE INSURANCE (3)

Principles of life insurance, types of policies, premiums, reserves, insurance programs, and government regulation. Prerequisite: FIN 301, 302 and 351.

462 ESTATES, WILLS AND TRUSTS (3)

Problems in the creation, management, and conservation of an estate. Personal and corporate trust work. Prerequisite: FIN 301, 302.

477 FINANCE STUDIES (1-3)

Independent reading and research in selected areas of finance. Prerequisite: senior standing in finance and department chairman's approval.

480 MONEY AND CAPITAL MARKETS (3)

Analysis of money and capital markets. Flow of funds and economic factors influencing flow of funds. Examination of markets for government securities, corporate debt, corporate equities, and corporate and individual mortgages. Prerequisite: EC 301, FIN 301, 302, FIN 303 or 412 or 402.

GRADUATE COURSES

510 (441) ANALYSIS OF SECURITIES (3)

Interpretation of data for evaluating securities and formulating policies and programs for individuals and institutions. Prerequisite: FIN 621 or equivalent.

520 (412) BANK MANAGEMENT (3)

Study of policy formulation in the commercial bank with emphasis on allocation of funds.

523 FAMILY FINANCIAL SECURITY (3)

Financial problems of the family: credit and borrowing, life and other forms of insurance, real estate ownership, savings and investment problems. Means of incorporating family financial security education in the secondary school curriculum. Prerequisite: graduate standing. Credit not applicable to the M.B.A. degree.

531 (431) LAND ECONOMICS AND REAL ESTATE ADMINISTRATION (3)

Problems in utilization of real estate resources by business firms. Interrelationship between business and public decision and policies related to the acquisition, development, use, and renewal of real property.

552 (452) LIFE INSURANCE PROGRAMMING (3)

Problems of adapting various forms of life insurance; annuities and settlement options related to estate building and conservation, tax problems; building life insurance programs.

601 INVESTMENTS SEMINAR (3)

Management and analysis of security portfolios for individuals and institutions.

602 FINANCIAL INSTITUTIONS SEMINAR (3)

Study of financial administration of financial institutions; policy formulation is stressed.

603 SEMINAR IN CORPORATE PROBLEMS (3)

Current developments in finance. Problems in financing business enterprise from the

viewpoint of business management and economic system. Reading and individual investigation of specific aspects.

621 GRADUATE SURVEY IN FINANCE (3)

641 (512) FINANCIAL MANAGEMENT I (3)

Study of financial analysis, short, intermediate, and long-term financing, and dividend policy; formulation of policy is emphasized.

642 FINANCIAL MANAGEMENT II (3)

Study of cost of capital and capital structure, investment of funds (capital budgeting), valuation, mergers, and reorganization. Prerequisite: FIN 618 or equivalent.

681 SPECIAL STUDIES IN FINANCE (1-3)

Intensive reading or research in a selected field of advanced finance. Prerequisite: graduate standing and consent of instructor.

699 THESIS (1-3)

FRENCH—See MODERN LANGUAGES

GEOGRAPHY (GEO)

Assistant Professor Ray (Acting Chairman); *Instructors* Kubiak, Lloyd, Muraco, Trail, Wetter.

11, 12, 13 INTRODUCTION TO SYSTEMATIC GEOGRAPHY (3)

The processes and distribution of the physical elements of the earth (11). The spatial organization of the cultural elements of man's environment (12). The geographic significance of man's economic activities (13). These three courses may be taken in any order or concurrently. Credit is granted for any course separately, except for meeting Common Curriculum requirements.

ADVANCED COURSES

Advanced courses in geography are open to students who have had nine quarter hours of geography, or twelve quarter hours in the social, biological, and physical sciences, or have junior or senior standing.

201, 202 WORLD REGIONAL GEOGRAPHY (3)

The cultural, social, economic, and political developments of representative regions of the western (201) and non-western (202) world in relation to geographic conditions.

225, 226 ECONOMIC GEOGRAPHY (3)

Geographic and economic factors in the development of major industrial areas of the world with emphasis on the location of primary raw material production (225) and the function of manufacturing and commerce (226).

271 CONSERVATION OF RESOURCES (3)

Economic and geographic appraisal of resource conservation in the United States, emphasizing problems associated with the human use of forests, grasslands, land, minerals, soil, water, wildlife, and recreational resources.

302 POLITICAL GEOGRAPHY (3)

Geographic appraisal of the factors influencing the evolution, structure, resource base, function, and associations of political units.

322 GEOGRAPHY OF LANDFORMS (3)

A study of the distribution of the world's landforms with emphasis on the processes and systems functioning to shape the natural landscape. Attention is given to the three-way interaction among landforms, other physical factors, and man.

332 CLIMATOLOGY (3)

The observation, measurement, and analysis of climatic elements and controls, climatic classification, and the relation of climate to man's economic and social activities.

343 (432) URBAN GEOGRAPHY (3)

Origin and growth of cities and geographic principles related to the distribution, function, structure, and situation of urban agglomerations.

354 GEOGRAPHY OF MANUFACTURING (3)

An examination of the factors of industrial location utilizing empirical examples. Included is an introduction to the basic theories and techniques underlying the decision process in manufacturing locations.

365 CARTOGRAPHY (5)

Principles of map projections, their construction, and use in illustrating geographic relationships. Included are methods of design, compilation, and graphic representation of data.

445* ADVANCED CARTOGRAPHY AND MAP INTERPRETATION (5)

The study and practice of compilation processes for the development of maps and models utilizing primary data sources. Prerequisite: GEO 365 or consent of instructor.

460* ADVANCED SYSTEMATIC GEOGRAPHY (3; maximum 15)

Geographic factors of various topics will be analyzed. Specific topic or field of concentration announced each time course is offered. Prerequisite: consent of instructor.

470* ADVANCED REGIONAL GEOGRAPHY (3; maximum 15)

Physical and cultural analysis of major and minor world regions. Specific region for study announced each time course is offered. Prerequisite: consent of instructor.

481*, 482* SPECIAL PROBLEMS IN GEOGRAPHY (1-5)

Research and problems designed for the specific needs and talents of the student. Prerequisite: Consent of instructor.

GEOLOGY (GL)

Professor Noel (Chairman); Associate Professor Richard; Assistant Professors Bradshaw, Kramer, Malone, Pushkar, Sherwin; Instructor Larson.

11-12-13 INTRODUCTORY GEOLOGY (4)

An introduction to the physical and chemical processes that have operated to produce the earth—its minerals, rocks, landforms, and economic mineral and fuel deposits. Physical and biologic evidence recorded in the rocks are used to interpret the history of the earth. The laboratory includes the study of common minerals and rocks, fossils, and the utilization of topographic maps, aerial photographs, and geologic maps. 2 lect. (75 minutes each.) 1 lab.

ADVANCED COURSES

201 WATER RESOURCES (3)

A study of the hydrologic cycle emphasizing past, present, and future problems in flood control, water pollution, and water resource development. Prerequisite: GL 13. 2 lect. (75 minutes each.) Not open to students with credit in GL 451.

203 MINERALS AND ROCKS (4)

The structure, symmetry, and composition of minerals. The composition, classification, and origin of rocks. Mineral and rock identifications are emphasized in the laboratory. Prerequisite: GL 13. 2 lect. (75 minutes each.) 1 lab.

301 CRYSTALLOGRAPHY AND MINERALOGY (5)

The external morphology of crystals is related to principles of atomic structure, bonding, substitution, polymorphism, and defect structures. The principles of x-ray diffraction are briefly introduced. Crystal form and mineral identification emphasized in laboratory. Prerequisite: GL 13, CHM 111-112 (may be taken concurrently). 2 lect. (75 minutes each.) 2 lab.

311 STRUCTURAL GEOLOGY (4)

Interpretation of the major and minor tectonic elements of the earth's crust. An introduction to geologic field methods is included. Prerequisite: GL 13. 2 lect. (75 minutes each.) 1 lab.

390-399 SPECIAL PROBLEMS (2-6)

Research and problems designed for specific needs and talents of the student. Prerequisite: junior standing.

400* INTRODUCTION TO EARTH PHYSICS (3)

Essentials of the gravity, magnetic, seismic, electrical, and radioactive properties of the earth with discussions on the applications of those properties in the solution of geologic problems. Prerequisite: GL 321. 2 lect. (75 minutes each.) Not open to students with credit in 422. Graduate credit for non-majors only.

401* ASTRONOMY (3)

The development of the current concepts and viewpoints of astronomy. Prerequisite: senior standing. Graduate credit for non-majors only.

411* OPTICAL CRYSTALLOGRAPHY (5)

The theory and practice of crystal optics and the determination of the optical constants of crystals by use of the polarizing microscope and immersion media. Introduction to minerals in thin section. Prerequisite: GL 301. 2 lect. (75 minutes each.) 2 lab.

412* PETROLOGY (5)

Study of the origin of igneous, metamorphic, and sedimentary rocks. Use of thin sections for mineral identification, microscopic structures, and rock classification emphasized in the laboratory. Prerequisite: GL 411. 2 lect. (75 minutes each.) 2 lab.

413* GEOCHEMISTRY (5)

The principles governing the distribution of the elements within the earth. Introduction to geochemical methods of research. Prerequisite: GL 13, CHM 111-112. 2 lect. (75 minutes each.) 2 lab.

422* GEOPHYSICS (5)

Analytical treatment of the principles of the gravity, magnetic, seismic, electrical, and radioactive properties of the earth and their use in determining the distribution and spatial configuration of rock bodies. Also included is the application of geophysical and petrophysical techniques in the discovery and delineation of ore bodies and fluids in the earth. Prerequisite: GL 311, PHY 142. 2 lect. (75 minutes each.) 2 lab.

430-431* INVERTEBRATE PALEONTOLOGY (3)

The morphology, geologic record, and geographic distribution of the major invertebrate groups characterized by significant fossil representation. Completion of a minor individual research project is required. For graduate credit a formal written report on the research project is required. Prerequisite: GL 13. 2 lect. (75 minutes each.) 1 lab.

432* MICROPALAEONTOLOGY (4)

The morphology, taxonomy, identification, and stratigraphic distribution of fossil micro-organisms especially foraminifera, ostracods, conodonts, and the microscopic parts of megafossils. Includes techniques for collection and preparation of specimens for study. Individual research project required. Prerequisite: GL 13. 2 lect. (75 minutes each.) 1 lab.

433* PHYSICAL STRATIGRAPHY (4)

Principles, rules, and techniques of correlation. Relationships between surface and sub-surface correlation. Geologic and geophysical correlation techniques are emphasized in the laboratory. Prerequisite: GL 13 and 311. 2 lect. (75 minutes each.) 1 lab.

434 FIELD GEOLOGY (SUMMER FIELD CAMP) (6)

In addition to the various shorter field trips connected with geology courses taken in residence, a summer field trip of not less than six weeks is required for the Bachelor of Science degree in geology. The course may be taken at one of several approved field stations operated by universities throughout the world. Prerequisite: GL 301, 311. Graduate credit for non-majors only.

451* HYDROGEOLOGY (4)

The geology of underground waters, their origin, migration, location, and exploitation. Methods of detecting underground water supplies. Prerequisite: GL 13, MTH 133. 2 lect. (75 minutes each.) 1 lab.

490-499* SPECIAL PROBLEM: (2-6)

Research and problems designed for specific needs and talents of the student. Prerequisite: senior standing. Graduate credit for non-majors only.

501*-502*-503* EARTH SCIENCE FOR TEACHERS (4)

The sources and forms of energy operating on the earth and the results of these operations on the origin, history, and evolution of the earth. 2 lect. 1 lab.

510 511 CHEMICAL GEOLOGY (4) Dr. Kramer

The development of atomistic models consistent with the laws of thermodynamics and the application of these models to the solution of geochemical problems. Individual research projects will be pursued in the laboratory. Prerequisite: GL 413 or equivalent. Corequisite: Physical Chemistry. 2 lectures and 1 laboratory.

514, 515, 516 NUCLEAR GEOCHEMISTRY (3) Dr. Pushkar

The examination of the different types of atomic species and the reactions they undergo. The use of radioactive isotopes and of daughter isotopes produced therefrom to measure ages of geologic events and as geochemical tracers. The study of the distribution and formation of the different isotopes in the earth and the solar system. Prerequisite: GL 413 or equivalent. 2 lectures.

518, 519 IGNEOUS ROCK ANALYSIS (4) Dr. Pushkar

Study of the occurrence, chemical geological features and genesis of selected families of volcanic plutonic rocks. Microscopic study of igneous rock suites in the laboratory. Prerequisite: GL 412 or equivalent. 2 lectures and 1 laboratory.

520, 521 ECONOMIC MINERAL DEPOSITS (4)

Factors governing the origin, localization and exploration of selected metallic and nonmetallic mineral deposits. First term will cover nonmetals; second term, metals. A detailed term paper is required. Prerequisites: courses in mineralogy and structural geology. Igneous petrology is recommended as a prerequisite.

534, 535, 536 MICROFAUNAL INVESTIGATIONS (4) Dr. Bradshaw

Investigation of each of the major groups of microfossils—foraminifera, ostracods, or conodonts. Recognition and interpretation of faunal association. A field problem is included. One group of microfossils will be studied in each course. Prerequisite: GL 433 or equivalent. 2 lectures and 1 laboratory.

540 SEDIMENTARY ANALYSIS (4) Dr. Noel

The theories, techniques, and applications of microscopic, physical, statistical and X-ray analyses of sedimentary rocks. Prerequisite: GL 411 or equivalent. 2 lectures and 1 laboratory.

550 NUMERICAL ANALYSIS IN GEOLOGY (4) Dr. Noel

The theory, technique, and application of statistical models, and computer analysis in geology. Introduction to linear programming, data systems and automatic mapping. Prerequisite: MTH 461 or equivalent. 2 lectures and 1 laboratory.

562 GROUNDWATER EXPLORATION AND EVALUATION (41) Dr. Richard

Geophysical exploration and delineation of aquifers. Interpretation of water yield from flow net and pumping test analysis. Prerequisites: GL 422, 451 or equivalent. 1 lecture, 1 conference, 1 laboratory.

580-589 SPECIAL PROBLEMS (1-5)

590-599 THESIS (2-5)

GERMAN—See MODERN LANGUAGES

GOVERNMENT—See POLITICAL SCIENCE

HISTORY (HST)

Professors Cox, Craine, (Chairman), Dailey, McStallworth; *Associate Professor* Dorn; *Assistant Professors* Arbagi, Becker, Rose, Spetter; *Instructors* Hughes, Merriam, Swann, Wachtell.

LOWER DIVISION COURSES

11, 12, 13 (11, 12) AMERICAN CIVILIZATION (3)

Survey of the interplay of forces that have brought about the evolutionary development of American economic, cultural, and political history from 1492 to the present. A functional and synoptic treatment of America's great historical problems. (11) Colonial foundations to 1815. (12) From 1815 to 1896. (13) Since 1896.

21, 22, 23 (21, 22) WESTERN CULTURE (3)

Survey of our Western Culture from the beginning of civilization to the present, with emphasis on art, literature, philosophy, institutions, and great cultural and intellectual movements; the ideas, men, and forces creating modern Western Culture. (21) From the first civilizations to 1500. (22) From 1500 to 1789. (23) Since 1789.

201 (307) COLONIAL LATIN AMERICA (3)

Backgrounds, discovery and conquest, and the colonies of Spain and Portugal in the New World.

202 (308) NINETEENTH CENTURY LATIN AMERICA (3)

Latin America in revolt and the emergence of the Latin American nations in the Nineteenth Century.

203 (308) MODERN AND CONTEMPORARY LATIN AMERICA (3)

The social, political, and economic development of the Latin American nations in the Twentieth Century.

214 THE NEGRO IN AMERICAN HISTORY (3)

The African background; the establishment of the Negro in colonial American society; the status of the Negro in Nineteenth Century America as a slave in the South and freeman in the North; the Abolitionist movement and the Civil War.

215 THE NEGRO IN AMERICAN HISTORY (3)

The Negro and Reconstruction; the status of the Negro in the post Reconstruction period and early Twentieth Century; World War I, World War II, Urbanization and its effects on the Negro community; the movement toward Negro equality from the Truman administration to the present.

218 (261) HISTORY OF OHIO: PREHISTORIC TIMES TO 1871 (3)

Physiographic factors and prehistoric Indians; conflicts among Indians, French, and English in the Ohio country; settlement and growth as a territory; political, economic, and cultural life of the state.



219 (261) HISTORY OF OHIO: SINCE 1871 (3)

Social, political, economic, and cultural life in Ohio during the age of growing industrialization and urbanization.

UPPER DIVISION COURSES

Upper division courses are open to sophomore, junior, and senior students; prerequisite of nine quarter hours of lower division history courses, or consent of instructor. Courses in American history require 11, 12, 13; those in European history require 21, 22, 23.

301* (306) ANCIENT AMERICA: THEORIES, OLMEC, TOLTEC, MAYA (3)

A study of the social, political, religious, and cultural foundations of the pre-Columbian cultures in America. Major emphasis will be given to the various theories of how man came to the Americas and upon the Olmec, Toltec, and Maya cultures.

302* (306) ANCIENT AMERICA: AZTEC AND INCA (3)

A study of the social, political, religious, and cultural foundations of the pre-Columbian cultures in America, with emphasis on the Aztec and Inca cultures.

304* HISTORY OF MEXICO: FROM 1810 TO 1876 (3)

The development of the Mexican nation with special attention to the War for Independence, Caudillo government, and the reform movement to 1876.

305* HISTORY OF MEXICO: SINCE 1876 (3)

The development of the Mexican nation beginning with the dictatorship of Díaz, with special attention on the political, social, economic, and cultural impacts of the Mexican Revolution.

309* THE SOUTH AMERICAN REPUBLICS: THE EAST COAST (3)

The development of the east coast republics of South America from the Wars of Independence to the present.

310* THE SOUTH AMERICAN REPUBLICS: THE WEST COAST (3)

The development of the west coast republics of South America from the Wars of Independence to the present.

314* HISTORY OF THE WEST: TO 1828 (3)

The expansion of the Anglo-American frontier from the first settlements in the Mississippi Valley; frontier problems and life; western economic developments, sectional political issues, and diplomatic relations explaining western expansion.

315* HISTORY OF THE WEST: SINCE 1828 (3)

The expansion of the Anglo-American frontier in the trans-Mississippi West; exploration; settlement; transportation; exploitation of natural resources; acquisitions of territory; political issues through the Agrarian Revolt.

321* (313) HISTORY OF ENGLAND: TO 1558 (3)

Roman, Saxon, Norman, and Tudor England to Elizabeth I.

322* (313-314) HISTORY OF ENGLAND: FROM 1558 TO 1815 (3)

The reign of Elizabeth I, Stuart and Hanoverian England.

323* (314) HISTORY OF ENGLAND: SINCE 1815 (3)

Victorian and contemporary Britain.

324* HISTORY OF FRANCE: TO 1500 (3)

Political, social, economic, intellectual, and religious history of France, 800-1500.

325* HISTORY OF FRANCE: SINCE 1500 (3)

Political, social, economic, intellectual, and religious history of France since 1500.

327* (316) HISTORY OF RUSSIA: TO 1801 (3)

Development of Russia from earliest times to the beginning of the Nineteenth Century; medieval disunity and the Mongol conquest; independence and unification; westernization; Peter the Great and Catherine the Great.

328* (317) HISTORY OF RUSSIA: FROM 1801 TO 1917 (3)

Political, social, and intellectual factors of Nineteenth Century Russia; revolutionary thought and action; philosophy and principles of reaction; background of World War I.

329* (318) HISTORY OF SOVIET RUSSIA (3)

Russia in the Twentieth Century; the revolutionary era from the March Revolution to the death of Lenin; the establishment of the Communist order; the Stalin Regime; World War II and Communist victories against the West; Khrushchev and afterward.

331* (455) SEVENTEENTH CENTURY COLONIAL AMERICA (3)

Political, economic, social, and religious developments in the American colonies during the Seventeenth Century; emphasis also on the European, especially the English, background.

332* (456) EIGHTEENTH CENTURY COLONIAL AMERICA (3)

Political, economic, social, and religious developments in the American colonies from 1696 to 1763.

333* REVOLUTION, CONFEDERATION, AND THE CONSTITUTION (3)

Causes of the War for Independence; the Declaration of Independence; Articles of Confederation; the Revolution and its consequences; the Critical Period and the Constitutional struggle. 1763-1789.

334* (457) THE EARLY AMERICAN REPUBLIC: FROM 1789 TO 1815 (3)

A study of the political trends, dominant personalities, foreign policy, social history, and economic growth during the Federalist Era.

335* (458) THE EARLY AMERICAN REPUBLIC: FROM 1815 TO 1850 (3)

A study of the period of Jeffersonian ascendancy, the War of 1812, the Era of Good Feelings, and Neo-Federalism in their political, social, economic, and diplomatic ramifications.

337 (351) CIVIL WAR AND RECONSTRUCTION: FROM 1850 TO 1862 (3)

Causes of the war; initial military campaigns and political issues.

338 (351) CIVIL WAR AND RECONSTRUCTION: FROM 1863 TO 1865 (3)

Military campaigns; political and economic problems in North and South; social life in North and South.

339 (351) CIVIL WAR AND RECONSTRUCTION: FROM 1865 TO 1877 (3)

Ideologies of Reconstruction; the South during Reconstruction; the North during Reconstruction.

340* AMERICA IN TRANSITION (3)

To trace the development of the United States from the end of Reconstruction to the end of the Nineteenth Century.

341* (353) TWENTIETH CENTURY AMERICA: TO 1920 (3)

Social, economic, political, and diplomatic development of the United States from the 1890's to 1920, with emphasis on Populism, Progressivism, the First World War, and the peace settlement.

342* (353-354) TWENTIETH CENTURY AMERICA: FROM 1920 TO 1940 (3)

Republican ascendancy, the Great Crash, the Depression, and the New Deal.

343* (354) TWENTIETH CENTURY AMERICA: SINCE 1940 (3)

The Second World War, the postwar era, and recent American problems.

351* (431) MEDIEVAL INSTITUTIONS (3)

A study of the church, political thought and practice, social and intellectual developments, and the rise of commerce.

352* (432) RENAISSANCE AND REFORMATION (3)

A study of these movements and their leaders as vital factors in the transition from medieval to modern times.

355* (331) THE FRENCH REVOLUTION AND NAPOLEON (3)

Causes and course of the French Revolution, and the rise and fall of Napoleon.

357* (332) EUROPE FROM 1815 TO 1870 (3)

Reaction, revolutions, and reforms from Metternich to Bismarck; industrial and scientific progress; emergence of nationalism, liberalism, and socialism.

359* (333) EUROPE FROM 1870 TO 1900 (3)

Political, economic, and cultural effects of nationalism, imperialism, and industrialization in Europe; national developments and international alliances.

361* (333) THE WORLD IN THE TWENTIETH CENTURY: TO 1929 (3)

Recent world history, with emphasis on Europe; the Edwardian Age; the causes and course of World War I; the Paris Peace Settlement; the League of Nations and the search for security; rise of Communism and Fascism.

362* (335) THE WORLD IN THE TWENTIETH CENTURY: FROM 1929 TO 1945 (3)

The world impact of the Great Depression; the rise of dictators and the march of aggression; causes and course of World War II.

363* THE WORLD IN THE TWENTIETH CENTURY: SINCE 1945 (3)

Contemporary world history; the World War II peace settlement; the eclipse and revival of Western Europe; Soviet Russia and its satellites; the Cold War; war in Korea and Viet Nam; the end of Colonialism; the current world scene.

371* (341) AMERICAN THOUGHT AND SOCIETY: TO THE REVOLUTION (3)

Selected topics in the social and intellectual history of colonial America with special emphasis on religion, education, literature, science, immigration, and aspects of formal culture.

372* (341-342) AMERICAN THOUGHT AND SOCIETY: FROM THE REVOLUTION THROUGH RECONSTRUCTION (3)

American thought and society, with emphasis on the development of a national culture, immigration, the westward movement, social experiments of the Jacksonian era, anti-slavery, Civil War, and the struggle over racial equality.

373* (342) AMERICAN THOUGHT AND SOCIETY: FROM THE GILDED AGE TO THE PRESENT (3)

Patterns of nationalization, industrialization, urbanization, immigration, pragmatism, and reform.

374* ECONOMIC AND TECHNOLOGICAL DEVELOPMENT OF THE UNITED STATES: TO 1840 (3)

Economic progress and technological change in an agrarian and commercial economy; the impact of growth and change on American social, political, and cultural life.

375* ECONOMIC AND TECHNOLOGICAL DEVELOPMENT OF THE UNITED STATES: SINCE 1840 (3)

Mechanization and mass-production and the rise of an industrial economy; the impact of economic growth and technological change on American social, political, cultural, and religious life.

377* (343) AMERICAN DIPLOMACY: FROM THE REVOLUTION TO 1860 (3)

Early problems with Great Britain, France, and Spain; special emphasis on the Monroe Doctrine and Manifest Destiny; rounding out the national boundaries.

378* (343) AMERICAN DIPLOMACY: FROM THE CIVIL WAR TO 1900 (3)

Emergence of the United States as a world power; expansion after 1865, with special emphasis on the 1890's.

379* (344) AMERICAN DIPLOMACY: FROM 1900 TO THE POST-WORLD WAR II ERA (3)

The diplomacy of Theodore Roosevelt's administration; special emphasis on the period from 1914 to 1945; the United States as the leading world power.

381* (422) INTELLECTUAL AND CULTURAL HISTORY OF EUROPE: TO 1300 (3)

A study of the history of ideas and cultural trends in the Greece and Rome of antiquity and Europe in the Middle Ages and the Renaissance; emphasis on the place of ideas in the political, economic, and social setting of each age, and their influence on later ages.

382* (422) INTELLECTUAL AND CULTURAL HISTORY OF EUROPE: FROM 1300 TO 1715 (3)

Ideas and cultural trends during the Reformation and early modern eras; religious upheaval; Rationalism and the rise of science; the Enlightenment; the rise of revolutionary Liberalism.

383* (422) INTELLECTUAL AND CULTURAL HISTORY OF EUROPE: SINCE 1715 (3)

Ideas and cultural trends during the last two centuries; Nineteenth Century Romanticism, Nationalism, Liberalism, Conservatism, Marxian Radicalism, and Darwinism; Twentieth Century science, philosophy, and political ideologies.

391 HISTORY OF THE FAR EAST: TO 1911 (3)

A survey of the history of Asia to the Twentieth Century, with emphasis upon the history and culture of China and Japan to 1911.

392 HISTORY OF THE FAR EAST: SINCE 1911 (3)

A survey of the history of Asia since 1911, with emphasis upon the emergence of China and Japan into the Twentieth Century and their relations with the western world.

399* A CENTURY OF REVOLUTION: 1689 TO 1789 (3)

A comparative view of the English Revolution of 1688, the American Revolution, and the French Revolution of 1789.

401* (309) THE UNITED STATES AND LATIN AMERICA: FROM 1810 TO 1900 (3)

An examination of the evolution of policies of general application, the foundations of hemispheric intercourse, recognition, the Monroe Doctrine, origins and development of Pan-Americanism, the Inter-American system, the O.A.S., and Communism in Latin America.

402* (309) THE UNITED STATES AND LATIN AMERICA: SINCE 1900 (3)

A study of the conflicts, issues, and special problems with individual countries, the Caribbean policies, relations with Central America, Mexico, Argentina, Brazil, and Chile.

421* TUDOR ENGLAND (3)

Consolidation of the monarchy; the break with Rome; the Elizabethan Compromise. Prerequisite: HST 322 or consent of instructor.

422* STUART ENGLAND (3)

The monarchy and the struggle for the liberties of the subject; the Rebellion and the Interregnum; the Restoration and the Glorious Revolution. Prerequisite: HST 322 or consent of instructor.

425* (436) TWENTIETH CENTURY BRITAIN: TO 1918 (3)

The passing of Victorian Britain, Edwardian Britain, and the Great War. Prerequisite: HST 323 or consent of instructor.

426* TWENTIETH CENTURY BRITAIN: SINCE 1918 (3)

Britain between the wars; the Second World War; peace again; contemporary Britain. Prerequisite: HST 323 or consent of instructor.

427* HISTORY OF CANADA: TO 1867 (3)

French and British Colonial Canada.

428* HISTORY OF CANADA: SINCE 1867 (3)

The Dominion emerges into a nation; French and English "nation;" the two World Wars and after.

429* INTELLECTUAL HISTORY OF RUSSIA IN THE NINETEENTH CENTURY (3)

A survey of cultural and intellectual developments in Russia beginning with the origins and development of the intelligentsia as a social group in the late Eighteenth Century.

471* HISTORY OF RELIGION IN AMERICA (3)

Survey of the development of religious thought and institutional life in the United States as viewed in the context of the growth of American culture.

474* AMERICAN URBAN HISTORY: COLONIAL TIMES TO 1860 (3)

A study of the growth and development of urban centers from colonial times to the eve of the Civil War, emphasizing the role of the city in the politics and economy, and as the crucibles of culture in rural America.

475* AMERICAN URBAN HISTORY: SINCE 1860 (3)

A study of the expansion of urban centers in industrial and urban America, with special emphasis on the role of immigration, the impact of industrialization, municipal corruption, reform impulses, and the growth of metropolitanism.

476* AMERICAN URBAN PROBLEMS IN THE TWENTIETH CENTURY (3)

An intensive study of the major urban problems of the late Nineteenth and early Twentieth centuries. Prerequisite: consent of instructor.

477* RUSSIAN-AMERICAN RELATIONS: TO 1917 (3)

Diplomatic relations between the United States and Russia from the American Revolution to the Russian Revolution; emphasis on the relations in the Nineteenth Century and how they deteriorated down to the rise of the Bolsheviks.

478* RUSSIAN-AMERICAN RELATIONS: SINCE 1917 (3)

Emphasis on comparison of the period from 1917 to 1933, when the United States refused to recognize the Soviet government, with the period from 1933 to the present.

481* HISTORY OF SCIENCE: TO 1687 (3)

The rise of science in Greece; the Hellenistic achievement; decline in the Middle Ages; Renaissance revival; the new astronomy of Copernicus; the new physics of Galileo; the new biology of Vesalius and Harvey; the new philosophy of science of Bacon and Descartes.

482* HISTORY OF SCIENCE: FROM 1687 TO 1859 (3)

Newton and the Newtonian "world-machine;" the rise of chemistry and geology; the age of steam and concepts of energy and thermodynamics; Maxwell and the electro-magnetic field; the philosophies of progress and positivism.

483* HISTORY OF SCIENCE: SINCE 1859 (3)

The Darwinian "revolution" in science and society; Freud and psychoanalysis; atomic physics, quantum mechanics, Einstein's relativity, and the uncertainty principle; psychology, anthropology, and other new sciences; science and technology.

490* PROBLEMS IN HISTORY (1-6)

For individual or group study in any area of history involving research into a problem or problems agreed upon by the student and instructor directing the study. Open by consent of instructor.

491* (481) INDEPENDENT READINGS (3-6)

A course to provide opportunity for further detailed study in one of the various fields of history. No class meetings, but reports in conferences with instructor. Open by consent of instructor.

492* SEMINAR IN AMERICAN HISTORY (3)

Training in historical research, bibliography, and historiography. Features reports and criticism; subject matter varies. Open by consent of instructor.

493* SEMINAR IN EUROPEAN HISTORY (3)

Training in historical research, bibliography, and historiography. Features reports and criticism; subject matter varies. Open by consent of instructor.

498* (493, 494) HISTORIOGRAPHY (3)

A course to acquaint students in history with the most important theories of historical interpretation and to introduce them to the work of representative historians of the past and present. Required of majors. Prerequisite: 27 quarter hours of history, 18 of which must be advanced, and senior standing.

499* (491) HISTORICAL METHODS (3)

Introduction to the methods and materials of historical research and writing; directed research in special topics designed to acquaint students in history with library use, note-taking, preparation of bibliography, the nature, use, and criticism of documents, and preparation of manuscript. Required of majors. Prerequisite: 27 quarter hours of history, 18 of which must be advanced, and senior standing.

501-510* READING SEMINARS

Prerequisites: graduate standing and permission of instructor. Each may be repeated with change in content; maximum credit, nine credit hours each seminar.

501* READING SEMINAR IN AMERICAN HISTORY (3)

503* READING SEMINAR IN EUROPEAN HISTORY (3)

505* READING SEMINAR IN LATIN AMERICAN HISTORY (3)

507* READING SEMINAR IN DIPLOMATIC HISTORY (3)

509* READING SEMINAR IN RUSSIAN HISTORY (3)

601-610* RESEARCH SEMINARS

Prerequisites: graduate standing and permission of instructor. Each may be repeated with change in content; maximum credit, nine credit hours each seminar.

602* RESEARCH SEMINAR IN AMERICAN HISTORY (3)

604* RESEARCH SEMINAR IN EUROPEAN HISTORY (3)

606* RESEARCH SEMINAR IN LATIN AMERICAN HISTORY (3)

608* RESEARCH SEMINAR IN DIPLOMATIC HISTORY (3)

610* RESEARCH SEMINAR IN RUSSIAN HISTORY (3)

699* THESIS (1-9)

LATIN—See CLASSICS

LIBERAL ARTS (LA)

Professor Baker (Dean) in charge.

401-402-403 NATIONAL AND WORLD ISSUES (3)

The objective of the course is to bring liberal arts seniors into contact with a number of vital world issues during his final year in the University. The course provides the senior, at a point when his university career is reaching its climax, opportunities to study and discuss major contemporary problems with experts in the several fields and with his fellow seniors from other disciplines.

LIBRARY SCIENCE (LS)

Professor Marquis (Dean, Education) in charge.

(Prerequisite for all courses: junior standing or permission of the Dean, Division of Education.)

321 CATALOGUING AND CLASSIFICATION (4) W

Instruction and practice in the preparation of library materials.

322 SCHOOL LIBRARY ORGANIZATION AND ADMINISTRATION (4) F

Administration of materials, staff, plans, and equipment; standards and certification; the place of the library in the school.

421 REFERENCE MATERIALS AND BIBLIOGRAPHY (4) F, Sp

Important reference works, indexes, and bibliographies with practical problems in their use.

422 BOOK SELECTION (4) W-Elementary, Sp-Secondary

Important reference works, indexes, and bibliographies with practical problems in their use.

431 LIBRARY PRACTICE (4) F, W, Sp
Supervised practice.

448* PRODUCTION OF INSTRUCTIONAL MATERIALS (4)
Each student completes a series of projects, each of which involve conceiving a visual aid that will help teach subject content when given the type of media in which to produce, execute, and evaluate materials. Includes: mounting, lettering, script writing, photography, tape recording, and using duplicators, diazo machines and drymount press for color lifts for transparencies.

449* AUDIO-VISUAL MATERIALS AND METHODS (3-4) W
(See ED 449.)

LINGUISTICS—See MODERN LANGUAGES

MANAGEMENT (MGT)

Associate Professors Lanford (Chairman), Murray, Schrickel.

103 HISTORY OF MANAGEMENT THOUGHT (3)

Presents a framework showing the evolution of management thought from the beginning of time to today. Various schools of management thought are discussed showing their origin and development.

301 PRINCIPLES OF MANAGEMENT (3)

General nature and functions of organization and management in American industry with underlying trends. Prerequisite: EC 11-12-13.

302 INTRODUCTION TO ORGANIZATIONAL BEHAVIOR (3)

A course oriented toward the development of an understanding of behavior within a modern organization. The relationships between the individual, the formal organization, and the informal organization are studied. Prerequisite: MGT 301.

303 (302) PRODUCTION MANAGEMENT (3)

Principles applied to plant location, buildings, layouts, equipment, production control, purchasing, budgets, sales, and control through costs. Prerequisite: MGT 302.

401 THE PERSONNEL FUNCTION (3)

Objectives, functions, and organization of a typical personnel program in modern business enterprise. Prerequisite: MGT 302.

402 COMPENSATION ADMINISTRATION (3)

Special attention to job analysis, job evaluation, administration of wages and hours, merit rating, etc. Prerequisite: MGT 401.

403 PROBLEMS IN PERSONNEL MANAGEMENT (3)

Solving actual problems in organization of the personnel function; recruitment, selection, development, and compensation of personnel; labor union relations; and development of personnel policy. Coordinates the material covered in MGT 301, 302, and 401. Prerequisite: MGT 401.

411 (421) SUPERVISORY MANAGEMENT (3)

Functions and responsibilities of the supervisor. Prerequisite: MGT 302.

412 (405) MANAGEMENT-UNION RELATIONS (3)

A critical study of the problems involved in labor-management relations. Includes the organizing stage, transition in labor relations, administering the agreement, and labor relations and public policy. Prerequisite: MGT 302.

413 (411) DESIGN AND MEASUREMENT OF WORK (3)

An analysis of motion and time study as a managerial tool. Job simplification and motion economy; time standards determination, predetermined time systems, and work sampling. Prerequisite: MGT 302.

431 INTERMEDIATE PRODUCTION MANAGEMENT (3)

Designed to provide a systems approach for understanding the production function in business. Emphasis on the analysis of major production problems and solutions relative to cost and effectiveness. Prerequisite: MGT 303.

432 (451) PRODUCTION CONTROL (3)

Principles and techniques of management; current practices in production planning, routing, scheduling, etc. Prerequisite: MGT 431.

433 (432) INDUSTRIAL AND INSTITUTIONAL PURCHASING (3)

Lectures and case studies relating to materials management. Emphasis on purchasing, receiving, storing, and inventory control; value analysis and specialized problems in institutional procurement. Prerequisite: MGT 302.

477 SPECIAL STUDIES IN MANAGEMENT (1-3)

Reading or research in a selected field of management. Prerequisites: Senior standing and consent of instructor.

GRADUATE COURSES

511 (461) MANAGEMENT OF TECHNOLOGICAL INNOVATION (3)

The series of courses, 511, 512, 513, are to provide a sound understanding of technological innovation and its problems for all managers. Case studies provide the framework for a basic understanding of technological change as an essential element of the manager's training. Prerequisite: MGT 301, 302.

512 (462) RESEARCH MANAGEMENT (3)

Designed to assist the manager in the application of a general understanding of technology and business to the search for new concepts through the translation of laboratory findings into viable production operations. Prerequisite: MGT 511.

513 (463) MANAGEMENT OF PRODUCT DEVELOPMENT (3)

Designed to assist the manager to gain a good understanding of the problems of adapting radically new technology to the production system. Prerequisite: MGT 512.

523 (422) PROBLEMS IN MANAGEMENT (3)

Solving actual problems in production, employment, safety, education and training, wages, Seminar in policies, practices, and techniques of production control to include planning, etc. Prerequisite: MGT 432 or graduate standing.

533 PRODUCTION METHODS AND CONTROLS (3)

Seminar in policies, practices, and techniques of production control to include planning, routing, scheduling, etc.

541 MANAGEMENT PLANNING (3)

Designed to assist the manager in the understanding of relationships between objectives, premises, preliminary alternatives, selection, evaluation, and implementation of both short range and long range plans.

542 MANAGEMENT CONTROL (3)

Designed to acquaint the manager with advanced control techniques to enable the achievement of predetermined objectives with available resources.

543 SYSTEMS MANAGEMENT (3)

This course is designed to provide the student with an understanding of systems management as applied in the industrial and defense complex of this country. Particular attention is given to the changing philosophies in our dynamic management environment. Discussion highlights the conceptual framework for systems management, an inquiry into the problems and contemporary solution of project authority, and methods of project control.

601 SEMINAR IN ORGANIZATIONAL BEHAVIOR (3)

Focuses on the problems faced by an administration in an interpersonal setting. Primary emphasis is on the analysis of individual and group behavior in a work situation. Extensive use is made of theory and research. Prerequisite: MGT 621 or equivalent.

602 SEMINAR IN PRODUCTION MANAGEMENT (3)

Designed to develop skill in analyzing the more complex economic problems encountered in managing production operations. Emphasis on the application of selected operations research methods. Prerequisite: MGT 641 or equivalent.

603 SEMINAR IN PERSONNEL AND INDUSTRIAL RELATIONS (3)

Approaches to the synthesis of personnel and industrial relations theory and practice. Analysis of the principal functional areas involved in the management of human resources. Prerequisite: MGT 621 or equivalent.

604 SEMINAR IN MANAGEMENT PHILOSOPHY AND APPLICATIONS (3)

An analysis of assumptions and conceptual thought underlying the theoretical study of management, both public and private. History of management thought and current concepts discussed. Prerequisite: MGT 621 or equivalent.

621 GRADUATE SURVEY IN MANAGEMENT (3)

Study and application of the principles of management to business and social organization. Attention on universality of management process to all operations.

641 (618) PRODUCTION AND OPERATIONS MANAGEMENT (3)

The basic production and operations functions common to business firms are examined. Emphasis is on identifying and defining major problem areas and developing decision processes for dealing with these problems. Designed primarily for non-management majors lacking knowledge of the production area. Prerequisite: MGT 621 or equivalent.

681 SPECIAL STUDIES IN MANAGEMENT (1-3)

Intensive reading or research in a selected field of advanced management. Prerequisite: graduate standing and consent of instructor.

699 THESIS (1-3)

MARKETING (MKT)

Professor Kegerreis; Associate Professor R. Evans; Assistant Professors Brown (Acting Chairman), Wise; Instructor Hutt.

103 HISTORICAL DEVELOPMENT OF MARKETING INSTITUTIONS (3)

A series of case studies tracing the adaptation and change in particular types of marketing institutions such as supermarkets, chain stores and department stores. Case histories of particular institutions such as Macy's and Sears, Roebuck and Company will also be discussed. In addition, the factors that shaped present day marketing institutions and the changes in society resulting from changes in marketing institutions are examined to assess the adaptive and formation characteristics of marketing institutions.

301 MARKETING IN THE ECONOMY (3)

An examination of the structure and functioning of the American marketing system with emphasis on its economic and social determinants, cost, productivity, and efficiency. Prerequisite: EC 11-12-13.

302 MARKETING MANAGEMENT (3)

Factors involved in the management of the marketing function relative to product development, promotion, pricing, physical distribution, and the determination of marketing objectives within the framework of the marketing system and available markets. Prerequisite: MKT 301.

303 CONSUMER BEHAVIOR (3)

Consumption and buying habits of consumers. Factors involved in choice making. Prerequisite: MKT 301.

336 SALESMANSHIP (3)

Principles underlying the philosophy and techniques of personal selling. Prerequisite: MKT 302.

ADVANCED COURSES

Note: In addition to courses specified, BUS 301 and MKT 301-302 or six hours of advanced credit in business or related fields are prerequisite for all courses.

401 (301) SALES ADMINISTRATION (3)

Principles employed by manufacturers in the administration of a sales force.

411 CREDIT MANAGEMENT (3)

Business and consumer credit. Risk determination. Collection policy, procedure, and control. Legal aspects.

421 INTERNATIONAL MARKETING (3)

Extension of business activities into international markets; cultural, economic, and political influences on global business operations.

431 DISTRIBUTION LOGISTICS (3)

Optimum utilization of facilities for physical supply, transportation, and warehousing, as a part of the marketing program of a business enterprise.

441 ADVERTISING (3)

Advertising as a communication tool in marketing management. Emphasis is placed on decision-making relative to copy, media selection, budgets, and on the appraisal of advertising effectiveness.

451 MARKETING RESEARCH (3)

Fundamental principles and techniques employed in the development and design of qualitative marketing surveys.

452 ANALYSIS OF MARKETS (3)

Quantitative measurements and analysis of marketing data, especially as related to data acquired through marketing research.

461 PRINCIPLES OF RETAILING (3)

Principles of retail management with particular emphasis on the merchandising practices of department and specialty stores. The contribution of effective retailing to the consumer and to the economy.

465, 466 PROBLEMS IN RETAIL MANAGEMENT (2-3)

Case course dealing with a wide variety of problems in retailing. Probable future developments in retailing and the analysis and decision-making needed to cope with anticipated changes. For three hours credit a written report usually based on a study of a specific problem in a retail store is required.

471 INDUSTRIAL MARKETING (3)

Nature, evolution, and functions of industrial marketing and wholesaling operations; market structure, pricing, promotion, governmental, economic, and ethical aspects.

477 SPECIAL STUDIES IN MARKETING (1-3)

Reading or research in a selected field of marketing. Prerequisites: senior standing and consent of instructor.

492 MARKETING POLICY (3)

Case course dealing with problems in all phases of marketing.

GRADUATE COURSES

501 (411) SOCIAL DIMENSIONS OF CREDIT (3)

A study of the factors involved in the use of credit extension as a tool of marketing; risk determination, credit promotion, collection policy, and control; credit theory; legal aspects of credit extension.

511 MODELS FOR MARKETING MANAGEMENT (3)

Concepts, analysis, and application of mathematical models for marketing management as related to sales forecasting, product policies, pricing, inventory control, physical distribution, and promotion.

521 (421) COMPARATIVE MARKETING (3)

An in-depth analysis of the factors affecting the ability of the marketer to operate on an international scale. Emphasis is placed on the effect of the developing "economic communities" throughout the world, the emergence of the "global enterprise," and the effect of recent legislation and trade agreements on future world trade.

531 (431) LOGISTICS (3)

The logistics of physical distribution. Involves the optimum utilization of facilities for physical supply, transportation, and warehousing as a part of the marketing program.

541 (441) MARKETING COMMUNICATION (3)

A course dealing primarily with the managerial problems of developing a sound promotional program. Problems are viewed through the eyes of the promotional manager in the business firm and major emphasis is placed on understanding the factors that affect decision making and mold promotional strategy.

551 (451) MARKETING INFORMATION (3)

A course designed to explore the basic methods and techniques used in conducting marketing surveys. Emphasis is placed on hypothesis development, research design, and construction of forms for data collection.

552 (452) MARKETING ANALYSIS (3)

The application of quantitative techniques in the field of marketing research. Emphasis is placed on selection of appropriate sampling methods and the statistical analysis of collected data.

561 (461) RETAIL POLICIES AND PROCEDURES (3)

A study of the field of retailing with emphasis on the organization and administration of retail stores, the control of the retail processes, and the contribution of the effective retailer to the consumer and the economy.

571 (471) MARKETING CHANNELS (3)

A study of the structure and functioning of the industrial marketing system. Considerable use is made of cases which emphasize the structure, pricing, promotion, governmental, economic, and ethical aspects of the marketing of industrial goods.

592 (492) MARKETING POLICIES AND PROBLEMS (3)

A case course which serves to draw into a significant relationship all the areas of marketing.

601 602 603 (501, 502) SEMINAR IN MARKETING (1-3)

Special investigations and analysis of current developments in marketing.

621 GRADUATE SURVEY IN MARKETING (3)

641 MARKETING DECISIONS IN BUSINESS ADMINISTRATION (3)

Marketing management in the administration of a business enterprise: product development, pricing, systems of distribution, financing, physical supply, promotion, and consumer motivation. Cases and readings. For M.B.A. non-marketing majors only.

681 SPECIAL STUDIES IN MARKETING MARKETING MANAGEMENT (1-3)

Independent investigation, research, reading, and analysis of assigned topics. Registration only with consent of instructor.

699 THESIS (1-3)

MATHEMATICS (MTH)

Associate Professors Coppage, Dixon, Gorowara, Haber, Kohler, Lewkowicz, L. Low, Maneri (Chairman), Sachs, Schaefer, Silverman; *Assistant Professors* Belna, M. Low; *Instructors* Meike, Park, Smith.

100, 101 ELEMENTARY ALGEBRA I, II (2) (Evening)

These two courses given in the evening are the equivalent of MTH 102.

102 ELEMENTARY ALGEBRA (4)

Programmed beginning algebra. Recommended for students who do not obtain a sufficiently high score on a placement exam. Four hours will be added to graduation requirements of anyone taking this course.

128 ELEMENTARY LINEAR MATHEMATICS (3)

Equations and inequalities in one and several variables, introduction to analytic geometry, the algebra of vectors and matrices, linear independence of n -tuples, solutions of linear systems in n variables. Prerequisite: two or more years of college preparatory mathematics in high school.

129 FINITE PROBABILITY MODELS (3)

Elementary logic, combinatorial mathematics, an elementary introduction to the concept of a probability model and its applications. Prerequisite: two or more years of college preparatory mathematics in high school. Not recommended as a first course in college mathematics.

130 COLLEGE ALGEBRA (3)

Number systems, rational exponents, graphs of functions, exponential and logarithmic functions, remainder and factor theorems. Prerequisite: a sufficiently high score on a placement exam or MTH 128 or 161 or 162 or 163, or 101, or 102 or 105.

131 TRIGONOMETRY (3)

Trigonometric and inverse trigonometric functions. Complex numbers. Prerequisite: a sufficiently high score on a placement exam or MTH 130. MTH 130 and 131 may be taken concurrently.

132 CALCULUS I (5)

Introduction to analytic geometry, functions, limits, the derivative and applications, the definite integral and applications. Prerequisite: a sufficiently high score on a placement exam or MTH 131 or 107 or 111.

133 CALCULUS II (5)

A continuation of MTH 132. Prerequisite: MTH 132 or 119.

135 CALCULUS Ia (3) (Evening)

Prerequisite: Same as MTH 132.

136 CALCULUS Ib (3) (Evening)

Prerequisite: MTH 135.

137 CALCULUS IIa (3) (Evening)

Prerequisite: MTH 136.

(Note: MTH 135, 136, 137 are given in the evening and are equivalent to MTH 132, 133.)

141 MATHEMATICAL FOUNDATIONS I (4)

Intuitive geometry, sets, relations, functions of the whole number system, place value notation, modular numbers.

142 MATHEMATICAL FOUNDATIONS II (4)

Permutations and combinations, development of the integers and rational numbers, fractional and basimal notations, metric geometry, algebraic numbers, polynomial and rational functions, elementary algebra, intuitive limits. Prerequisite: MTH 141 or 171.

143 MATHEMATICAL FOUNDATIONS III (4)

Real numbers, complex numbers, functions represented by infinite series, elementary functions, operations with functions. Prerequisite: MTH 142 or 172.

200 ACCELERATED CALCULUS I (3)

This is a course designed for those who want to review calculus. This along with MTH 300 would cover the material of MTH 132, 133, 231, 232. Prerequisite: a previous (perhaps much forgotten) knowledge of calculus or consent of instructor. This course is usually given in the evening.

228 CALCULUS (3)

The first course of a sequence (228-229) intended to provide an introduction to the basic notions of calculus for students of business or social science. Limits of functions, derivatives, anti-derivatives, the definite integral, functions of several variables, partial derivatives, and applications including the study of extremal problems in single variable and multivariable calculus. Prerequisite: MTH 130 or a sufficiently high score in a placement exam. Credit cannot be received for both MTH 228 and 132 or 135.

229 CALCULUS (3)

Continuation of MTH 228. Prerequisite: MTH 228.

231 CALCULUS III (5)

Continuation of MTH 133. Prerequisite: MTH 133.

232 CALCULUS IV (5)

Continuation of MTH 231 and includes multiple integrals and infinite series. Prerequisite: MTH 231 or 201.

233 DIFFERENTIAL EQUATIONS (5)

Elementary first order equations, linear equations, linear systems, series solutions, Laplace transform, applications. Uniqueness and existence theorems for solutions, asymptotic stability, phase plane. Prerequisite: MTH 232 or 202.

235 CALCULUS IIIa (3) (Evening)

Prerequisite: MTH 137 or 251.

236 CALCULUS IIIb (3) (Evening)

Prerequisite: MTH 235.

237 CALCULUS IVa (3) (Evening)

Prerequisite: MTH 236.

238 CALCULUS IVb (3) (Evening)

This course includes some differential equations. Prerequisite: MTH 237.

239 DIFFERENTIAL EQUATIONS (3) (Evening)

Along with some of MTH 238, this course is the same as MTH 233. Prerequisite: MTH 238. (Note: MTH 235-239 are given in the evening and cover the same material as MTH 231-233.)

280 INTRODUCTION TO MATHEMATICAL PROOF (3)

Topics selected by the instructor will be used to give students experience in constructing mathematical proofs. Prerequisite: The course is intended for sophomores or juniors who have just completed the calculus sequence.

300 ACCELERATED CALCULUS II

A continuation of MTH 200. Prerequisite: MTH 200.

310* DISCRETE STRUCTURES I: FOUNDATIONS (3)

Topics from set theory, Boolean algebra, logic, algorithm theory and formal languages. Prerequisite: Junior standing.

316* NUMERICAL METHODS FOR DIGITAL COMPUTERS I (3)

An introduction to numerical methods used in the sciences. Included will be methods of interpolation, data smoothing, functional approximation, integration, solutions of systems of equations, and solutions of ordinary differential equations. Prerequisite: MTH 233 and EGR 210.

317* NUMERICAL METHODS FOR DIGITAL COMPUTERS II (3)

Continuation of MTH 316. Prerequisite: MTH 316.

331* VECTOR ANALYSIS (3)

Algebra of vectors, vector valued function, gradient, curl, divergence, line and surface integrals, integral theorems, curvilinear coordinates, applications. Prerequisite: MTH 232 or 238 or 212 or 202.

332* COMPLEX VARIABLES (3)

Topics discussed include power series expansion, the formula of Cauchy, residues, conformal mappings, and elementary functions in the complex domain. Prerequisite: MTH 232 or 239 or 212 or 202.

333* PARTIAL DIFFERENTIAL EQUATIONS AND BOUNDARY VALUE PROBLEMS (3)

Partial differential equations, boundary value problems, eigenfunctions, Fourier series, applications. Prerequisite: MTH 233 or 239 or 212 or 301.

355* MATRIX ALGEBRA I (3)

Algebra of matrices, determinants, inverses, rank, linear independence; characteristic equations, roots, and vectors. Prerequisite: MTH 232 or 238 or 212 or 202.

356* MATRIX ALGEBRA II (3)

Vector spaces, linear transformations, unitary and orthogonal transformations, inner products, triangularizations, diagonalizations, quadratic forms. Prerequisite: MTH 355.

401-2-3* MATHEMATICAL FOUNDATIONS I, II, III (4)

This course covers material of MTH 141-2-3 and is open only to In Service Institute registrants.

411* ADVANCED COMPUTER PROGRAMMING I (4)

Machine language programming, assembly language programming, subroutines, input/output interrupt systems, auxiliary storage problems, algebraic languages, debugging techniques. Prerequisite: ERG 210 and at least junior standing. 3 hrs. lecture. 1 hr. lab.

412* ADVANCED COMPUTER PROGRAMMING II (4)

Continuation of MTH 411. Prerequisite: MTH 411. 3 hrs. lecture. 1 hr. lab.

413* ADVANCED COMPUTER PROGRAMMING III (4)

Continuation of MTH 412. Prerequisite: MTH 412. 3 hrs. lecture, 1 hr. lab.

431* REAL VARIABLES I (3)

Functions, sequences, limits, continuity, differentiability, integration, and mean-value theorems. Prerequisite: completion of the calculus sequence.

432* REAL VARIABLES II (3)

Infinite series, uniform convergence, Taylor series, improper integrals, special functions, and Fourier series. Prerequisite: MTH 431.

433* REAL VARIABLES III (3)

Theory of functions of several variables, vector-valued functions. Prerequisite: MTH 432.

440* HISTORY OF MATHEMATICS (3)

Development of calculus, antiquity through Newton, Leibnitz. Development of classical analysis. The rise of abstraction; set theory, algebra, topology. Modern analysis. Prerequisite: MTH 232, 355, and 471.

455* INTRODUCTION TO MODERN ALGEBRA I (3)

Elementary theory of groups, rings, integral domains, fields, homomorphism, isomorphism. Prerequisite: MTH 355 or 311.

456* INTRODUCTION TO MODERN ALGEBRA II (3)

Continuation of MTH 455. Prerequisite: MTH 455.

457* DISCRETE STRUCTURES II: COMBINATORICS (3)

Topics from permutations, combinatorics, generating functions, recurrence relations, Polya's theory of counting. Prerequisite: Junior standing.

458* DISCRETE STRUCTURES III: GRAPH THEORY (3)

Fundamental Concepts, trees, circuits, cut sets, planar and dual graphs, transport networks, matching theory. Prerequisite: MTH 457.

461* STATISTICS (3)

Algebra of sets, set functions, probability set functions, density and distribution functions, probability models, expectation, Chebyshev's inequality, conditional probability, marginal

and conditional distributions, stochastic independence, the binomial, Poisson, gamma, chi-square, normal and bivariate normal distributions, sampling theory and transformations of variables. Prerequisite: completion of calculus sequence.

462* STATISTICS (3)

The t and F distributions, change of variables, moment-generating functions, distributions and expectations of random variables, interval estimation, order statistics, limiting distributions, central limit theorem, point estimation, sufficient statistics, Rao-Blackwell theorem, completeness, uniqueness, exponential class of probability density functions, stochastic independence. Prerequisite: MTH 461.

463* STATISTICS (3)

The Rao-Cramer inequality, maximum likelihood estimation, decision functions, statistical hypotheses, UMP tests, SPR tests, minimax and Bayesian tests, likelihood ratio tests, chi-square tests, analysis of variance, quadratic forms, noncentral chi-square and F , regression, multiple comparisons, multivariate normal distribution. Prerequisite: MTH 462 and 311, or 355.

471* GEOMETRY I (3)

Topics in the foundations of Euclidean geometry, introduction to non-Euclidean and other geometries. Prerequisite: MTH 232 or 238 or 212 or 202.

472* GEOMETRY II (3)

Continuation of MTH 471. Prerequisite: MTH 471.

475* DIFFERENTIAL GEOMETRY (4)

Calculus on Euclidean space, Frame fields, calculus on a surface, shape operators, geometry of surfaces in Euclidean 3 space. Prerequisite: MTH 355 or 311 and 331 or 405.

488* INDEPENDENT READING (1-5)

Prerequisite: consent of instructor.

492* SEMINAR (UNDERGRADUATE) (1)

Prerequisite: consent of instructor.

516* NUMERICAL ANALYSIS I (4)

Mathematical analysis of numerical methods used in the sciences. Course material includes selections from the following topics: matrix and iterative methods of solving systems of equations; computation of eigenvalues and eigenvectors; polynomial approximation; trigonometric approximation; interpolation; integration; ordinary differential equations; boundary value problems; partial differential equations. Prerequisites: Knowledge of the FORTRAN programming language or permission of the instructor; courses MTH 233, 333, 335, and 432, or their equivalents.

517* NUMERICAL ANALYSIS II (4)

Continuation of MTH 516. Prerequisite MTH 516.

518* NUMERICAL ANALYSIS III (4)

Continuation of MTH 517. Prerequisite MTH 517.

531* REAL ANALYSIS I (4)

Set theory, the real number system, compactness, completeness, the Cantor set, category. Prerequisite: MTH 432 or equivalent undergraduate analysis course.

532* REAL ANALYSIS II (4)

Continuity, sequences, convergence, derivatives, measure, Borel sets. Prerequisite: MTH 531 or equivalent.

533* REAL ANALYSIS III (4)

Lebesgue integral, bounded variation and absolute continuity, arc length, product measure, Fubini's theorem. Prerequisite: MTH 532 or equivalent.

536* CALCULUS OF VARIATIONS (4)

Problems and methods of the calculus of variations presented in a manner suitable for students of mathematics, physics, or engineering. Prerequisite: MTH 331, 332, 333 or MTH 432.

538* COMPLEX ANALYSIS I (4)

Complex integration, conformal mapping, series, entire functions, meromorphic functions. Prerequisite: MTH 332 or an equivalent undergraduate complex variable theory course.

539* COMPLEX ANALYSIS II (4)

Riemann mapping theorem, analytic continuation, the monodromy theorem. Prerequisite: MTH 538 or equivalent.

551* ALGEBRA I (4)

Group theory—*isomorphism theorems*, Jordan-Holder theorem, permutation groups, Sylow theorems, finitely generated Abelian groups, free groups. Prerequisite: MTH 356 and MTH 456 or equivalent.

552* ALGEBRA II (4)

Ring theory—polynomial rings, unique factorization, radicals, Wedderburn-Artin structure theory. Prerequisite: MTH 551.

553* ALGEBRA III (4)

Field theory—simple extensions, Galois theory, solvability by radicals, cyclotomy, finite fields and Wedderburn's theorem. Prerequisite: MTH 552.

571* TOPOLOGY I (4)

Topological spaces, elements of point set theory. Prerequisite: MTH 432 or equivalent undergraduate analysis course.

572* TOPOLOGY II (4)

A continuation of general topology and an introduction to algebraic topology. Prerequisite: MTH 571.

592* SPECIAL PROBLEMS (GRADUATE) (1-5)

Prerequisite: consent of instructor.

600* GRADUATE SEMINAR (1)

Prerequisite: consent of instructor.

630* TOPICS IN ANALYSIS (1-4)

Prerequisite: consent of instructor.

650* TOPICS IN ALGEBRA (1-4)

Prerequisite: consent of instructor.

670* TOPICS IN GEOMETRY (1-4)

Prerequisite: consent of instructor.

699* GRADUATE RESEARCH (1-18)

Prerequisite: consent of instructor.

The following is the proper continuation of mathematics courses from the trimester to the quarter system.

If a student has completed	He should con- tinue the day sequence with	He should con- tinue the night sequence with
Math 112	Math 133 a	Math 137 a
119	133	136 a
201	232	237
212	331	331
251	231	235
252	232	237
202	233	238
301	331	331

a. Those following this path will repeat some material.

MODERN LANGUAGES (ML) *Associate Professor Penot (Chairman).*

FRENCH (FR) *Instructors Geiniman, Stuyvesant.*

101-102-103 (101-102) BEGINNERS' COURSE (4)

Objective: to read and understand ordinary French without translation and to speak and write it with increasing ability. Students who have had French in high school or college will be required to take a placement test prior to enrolling in FR 101, 102, or 103.

ADVANCED COURSES

FR 101-102-103 or their equivalents are the minimum prerequisite for all advanced French courses.

201-202-203 (201-202) SECOND YEAR FRENCH (3)

Grammar review (first part of 201) reading and discussion of selected texts, with practice in speaking and writing the language. Students who have had French in high school or college will be required to take a placement test prior to enrolling in FR 201, 202, or 203.

241, 242, 243 INTERMEDIATE FRENCH CONVERSATION

Practice in every day conversational French. Prerequisite: FR 103 or equivalent or consent of instructor.

301, 302, 303 (301-302) FRENCH LITERATURE (3)

Survey course. (310) Nineteenth Century. (302) Seventeenth and Eighteenth Centuries; (303) Medieval and Renaissance periods. Prerequisite: FR 203, or four units of high school French or equivalent.

321, 322, 323 (321-322) FRENCH COMPOSITION (2)

Oral and written composition in French; translations from English into French. Further grammar study. FR 321, 322, 323 should be taken concurrently with FR 341, 342, 343. Prerequisite: FR 203 or equivalent, or consent of instructor.

341, 342, 343 (341-342) ADVANCED FRENCH CONVERSATION (2)

This course will be conducted in French. Its subject matter will be for the most part the culture of the French world. FR 341, 342, 343 should be taken concurrently with FR 321, 322, 323. Prerequisite: FR 243 or equivalent, or consent of instructor.

351 (411) FRENCH CIVILIZATION (3)

Study of the main currents of French civilization with special emphasis on the development of literary and cultural aspects of the French nation and its place in the modern world. May be given in French.

361 (361-362) FRENCH PRONUNCIATION AND DICTION (2)

Pronunciation, diction, and intonation. Corrective exercises and laboratory work. Prerequisite: FR 203 or equivalent or consent of instructor.

431 SEMINAR IN NINETEENTH CENTURY FRENCH SHORT STORY (2-3)

Intensive study of short stories from such authors as Flaubert, Maupassant, etc. Prerequisite: FR 301.

432 SEMINAR IN SEVENTEENTH CENTURY AND TRAGEDY (2-3)

Intensive study of selected plays of Molière, Corneille, and Racine. Prerequisite: FR 303.

433 SEMINAR IN FRENCH POETRY FROM BAUDELAIRE TO APOLLINAIRE (2-3)

Prerequisite: FR 464.

450 INDEPENDENT UNDERGRADUATE RESEARCH (1-3)

462, 463, 464 (462) TWENTIETH CENTURY FRENCH LITERATURE (3)

Readings and reports in (462) the novel, (463) drama, and (464) poetry. Prerequisite: FR 301 or equivalent or consent of instructor.

471-472 (470) LINGUISTICS (2)

See LI 471-472

481-482 INDEPENDENT READING FOR ADVANCED STUDENTS (3)

GERMAN (GER)

Associate Professor Babb; Assistant Professor Gensch; Instructors Miesneiks, Steineman, A. Whissen.

101-102-103 (101-102) BEGINNERS' COURSE (4)

Objective: to read and understand ordinary German without translation and to speak and write it with increasing ability. Students who have had German in high school or college will be required to take a placement test prior to enrolling in GER 101, 102, or 103.

ADVANCED COURSES

GER 101-102-103 or their equivalents are the minimum prerequisite for all advanced German courses except 351, 352, 353, which are open to any juniors or seniors.

201-202-203 (201-202) SECOND YEAR GERMAN (3)

Grammar review (first part of 201), reading and discussion of selected texts, with practice in speaking and writing the language. Students who have had German in high school or college will be required to take a placement test prior to enrolling in GER 201, 202, or 203.

301, 302, 303 (301-302) MASTERPIECES OF GERMAN LITERATURE (3)

(301) Readings from representative authors of the classical period. (302) Readings from representative authors of the periods of Romanicism and Poetic Realism. (303) Readings from representative modern authors. Prerequisite: GER 203, or four units of high school German, or the equivalent.

315, 316, 317 (315-316) SCIENTIFIC GERMAN (2)

Intensive reading in all areas of expository and technical German. Prerequisite: GER 203. The courses must be taken in numerical sequence.

321, 322, 323 (321-322) GERMAN COMPOSITION (2)

Oral and written composition in German; translations from English into German. Further grammar study. It should be taken concurrently with GER 341, 342, 343. Prerequisite: GER 203 or equivalent or consent of instructor.

341, 342, 343 (241-242) GERMAN CONVERSATION (2)

This course will be conducted in German. Its subject matter will be for the most part the culture of the German-speaking world. It should be taken concurrently with GER 321, 322, 323. Prerequisite: GER 203 or equivalent or consent of instructor.

351 THOMAS MANN IN ENGLISH TRANSLATION (3)

Reading and discussion in English. Background lectures, discussions, and reports. Not open to German and German education majors. Juniors and seniors only.

352 MASTERPIECES OF GERMAN LITERATURE IN ENGLISH TRANSLATION (3)

Intensive study of significant authors. Not open to German and German education majors. Juniors and seniors only.

353 (351-352) COMPARATIVE LITERATURE STUDIES IN GERMAN LITERATURE IN ENGLISH TRANSLATION (3)

Comparative literature study of a selected area of German literature. Topic to be chosen by the instructor. Juniors and seniors only.

401, 402 GERMAN LITERATURE OF THE EIGHTEENTH CENTURY (3)

Intensive study of (401) representative authors in the Enlightenment and (402) Goethe and Schiller. Prerequisite: GER 303 or consent of instructor.

403 (402, 411) GERMAN ROMANTICISM (3)

Early and Late School. Prerequisite: GER 303 or consent of instructor.

411, 412, 413 (411, 412) GERMAN LITERATURE OF THE NINETEENTH CENTURY (3)
Readings and reports in Nineteenth Century (411) prose, (412) drama, (413) lyrics and ballads. Prerequisite: GER 303 or consent of instructor.

416, 417 ADVANCED SCIENTIFIC GERMAN (3)
Intensive translation in various technical areas. Practice in (416) abstracting and (417) editing. Prerequisite: GER 317.

421 EARLY GERMAN LITERATURE (3)
An historical survey of German literature from the earliest times to the Renaissance and Reformation. Prerequisite: GER 303 or consent of instructor.

422 RENAISSANCE AND REFORMATION (3)
Representative German authors of the period. Prerequisite: GER 303 or consent of instructor.

423 (421, 422) BAROQUE (3)
Representative German authors of the period. Prerequisite: GER 303 or consent of instructor.

431, 432, 433 (431, 432) GERMAN LITERATURE OF THE TWENTIETH CENTURY (3)
Readings and reports in Twentieth Century (431) prose, (432) drama, (433) lyrics. Prerequisite: GER 303 or consent of instructor.

441 THOMAS MANN (3)
Readings in the short stories and *Der Zauberberg*. Prerequisite: GER 303 or consent of instructor.

442 HISTORY OF THE GERMAN LANGUAGE (3)

443 (302) GOETHE'S *Faust* (3)
Intensive study of *Faust I* and *Faust II*. Prerequisite: GER 303.

450 UNDERGRADUATE RESEARCH IN GERMAN (1-3)

461 INTRODUCTION TO GERMANIC FOLKLORE (3)
A survey of Germanic folklore as it relates to literature. Prerequisite: consent of instructor; junior or senior standing.

462 GERMAN CULTURE AND CIVILIZATION I (3)
A survey of culture and institutions. Prerequisite: GER 303.

463 GERMAN CULTURE AND CIVILIZATION II (3)
A survey of culture and institutions. Prerequisite: GER 303.

471-472 (470) LINGUISTICS (2)
See LI 471-472.

481-482 INDEPENDENT READING FOR ADVANCED STUDENTS (3)

LINGUISTICS (LI)

Associate Professor Babb.

211-212 INTRODUCTION TO GREEK AND LATIN COMPARATIVE LINGUISTICS (2)
A linguistic study of the morphology (inflections) of Greek and Latin. Exercises are also provided to give the student some acquaintance with the syntax and vocabulary of both languages. Prerequisite: advanced standing in any language or consent of instructor. (Simultaneous listing as Greek 211-212 and Latin 211-212.)

261, 262, 263 (261-262) PRONUNCIATION OF FOREIGN LANGUAGES (2)
Designed primarily for students of singing. Study of the individual sounds of each language is followed by intensive readings of song lyrics. Carries advanced credit provided the student has passed the 202 course in any foreign language, or a course in phonetics. Given in alternate years.

471-472 (470) INTRODUCTION TO HISTORICAL AND COMPARATIVE LINGUISTICS (2)

Principles of the historical and comparative study of languages; introduction to Indo-European, Germanic, and Romance philology; linguistics and cultural history; dialect geography in Europe and the United States. Prerequisite: consent of instructor. The courses must be taken in numerical sequence. (Simultaneous listing as CLS 471-472, FR 471-472, GER 471-472, SPN 471-472.)

RUSSIAN (RUS)

Instructor Miesnieks.

101-102-103 (101-102) BEGINNERS' COURSE (4)

Objective: To read and understand ordinary Russian without translation and to speak and write it with increasing ability. Students who have had Russian in high school or college will be required to take a placement test prior to enrolling in RUS 101, 102, or 103.

ADVANCED COURSES

RUS 101-102-103 or their equivalents are the minimum prerequisite for all advanced Russian courses.

201-202-203 (201-202) SECOND YEAR RUSSIAN (3)

Grammar review (first part of 201), reading and discussion of selected texts, with practice in speaking and writing the language. Students who have had Russian in high school or college will be required to take a placement test prior to enrolling in RUS 201, 202, or 203.

301, 302, 303 RUSSIAN LITERATURE (3)

Survey course. Prerequisite: RUS 203 or equivalent.

SPANISH (SPN)

Assistant Professor Larkins; Instructor Torres.

101-102-103 (101-102) BEGINNERS' COURSE (4)

Objective: to read and understand ordinary Spanish without translation and to speak and write it with increasing ability. Students who have had Spanish in high school or college will be required to take a placement test prior to enrolling in SPN 101, 102, or 103.

ADVANCED COURSES

SPN 101-102-103 or their equivalents are the minimum prerequisite for all advanced Spanish courses except 351, 352, 353, which are open to any juniors or seniors.

201-202-203 (201-202) SECOND YEAR SPANISH (3)

Grammar review (first part of 201), reading and discussion of selected texts, with practice in speaking and writing the language. Students who have had Spanish in high school or college will be required to take a placement test prior to enrolling in SPN 201, 202 or 203.

301, 302, 303 (301-302) SPANISH LITERATURE (3)

Survey course: (301) from the beginning to the Golden Age; (302) from the Golden Age to Romanticism; 303) from Romanticism to the present day. Readings, lectures, reports, and discussions. Prerequisite: SPN 203, or four units of high school Spanish, or equivalent.

321, 322, 323 (321-322) SPANISH COMPOSITION (2)

Oral and written composition in Spanish; translations from English into Spanish. Further grammar study. 321, 322, 323 should be taken concurrently with SPN 341, 342, 343. Prerequisite: SPN 203 or equivalent or consent of instructor.

331, 332, 333 (331-332) SPANISH-AMERICAN LITERATURE (3)

Reading of poetry, novels, and plays (331) from pre-Columbian times to the period of Independence; (332) of the Nineteenth Century; (333) from Modernism to the present day. Prerequisite: SPN 203 or equivalent or consent of instructor.

341, 342, 343 (221-222) SPANISH CONVERSATION (2)

This course will be conducted in Spanish. Its subject matter will be for the most part the culture of the Hispanic world. SPN 341, 342, 343 should be taken concurrently with SPN 321, 322, 323. Prerequisite: SPN 203 or equivalent or consent of instructor.

351 DON QUIXOTE IN ENGLISH TRANSLATION (3)

Intensive reading of *Don Quixote* in English translation. Background lectures, discussions, and reports on Cervantes and his time. Not open to Spanish and Spanish education majors. Juniors and seniors only.

352 MASTERPIECES OF HISPANIC LITERATURE IN ENGLISH TRANSLATION (3)

Intensive study of significant authors of the Iberian Peninsula and Hispanic America. Not open to Spanish and Spanish education majors. Juniors and seniors only.

353 COMPARATIVE LITERATURE STUDIES IN HISPANIC LITERATURE IN ENGLISH TRANSLATION (3)

Comparative literature study of a selected area of Hispanic literature. Topic to be chosen by the instructor. Juniors and seniors only.

361 SPANISH PHONETICS (2)

Pronunciation and intonation. Corrective exercises and laboratory work. Prerequisite: SPN 203 or equivalent or consent of instructor.

The following courses require SPN 303 or consent of instructor. When appropriate, additional prerequisites are designated.

401 THE SPANISH PICARESQUE NOVEL (3)

Intensive reading of such works as *Lazarillo de Tormes*, *Vida del Buscón*, and *Guzmán de Alfarache*.

402 (401) THE SPANISH NOVEL OF THE NINETEENTH CENTURY (3)

Nineteenth Century prose works by Galdós and others.

411 GOLDEN AGE DRAMA (3)

Intensive readings of dramas by playwrights of the Sixteenth and Seventeenth Centuries.

412 MODERN DRAMA (3)

Intensive readings of dramas by playwrights of the Nineteenth and Twentieth Centuries.

421-422, 423 CERVANTES (3)

(421) Intensive study of *Don Quixote*, Part I. (422) Intensive study of *Don Quixote*, Part II. (423) Readings in Cervantes' other works, including *novelas ejemplares*, *entremeses*, and longer dramatic works. Lectures, discussions and oral reports on Cervantes and his time. SPN 421 is prerequisite to SPN 422.

431 SEMINAR IN SPANISH LITERATURE (2-3)

Intensive study of selected topics in peninsular literature. Background lectures, oral reports, and discussions.

432 SEMINAR IN SPANISH-AMERICAN LITERATURE (2-3)

Intensive study of selected topics in Spanish-American literature. Background lectures, oral reports, and discussions. Prerequisite: SPN 333 or consent of instructor.

441 CONTEMPORARY SPANISH LITERATURE (3)

Readings in the novel, poetry, and drama of major Spanish writers in the post-Civil War period.

442 CONTEMPORARY LATIN-AMERICAN LITERATURE (3)

Readings in the novel, poetry, and drama of various Latin-American writers from the late 1930's to the present day. Prerequisite: SPN 333 or consent of instructor.

450 UNDERGRADUATE RESEARCH IN SPANISH (1-3)

462 THE GENERATION OF 1898 (3)

Novel, poetry, and theatre of Unamuno, Baroja, and others.

471-472 (470) LINGUISTICS (2)

See LI 471-472.

481, 482 INDEPENDENT READING FOR ADVANCED STUDENTS (3)



MUSIC (MUS)

Associate Professor Fenton (Chairman), Guinn; *Assistant Professors* Atsalis (on leave), Foster, Magill, Poff, W. Wood; *Lecturer* Katz; *Instructors* Olds, Young.

APPLIED MUSIC

Private instruction is offered in the fields of concentration as listed below. Subject to the regulations of the academic division in which the student is registered, each half-hour lesson per week may carry one or two credit hours per quarter at the undergraduate level, depending upon the level of proficiency demonstrated by the student. All non-music majors, as well as music majors, must receive departmental approval before registration in applied music.

100 PIANO (1) (2) (4)	190 VIOLA (1) (2) (4)
110 VOICE (1) (2) (4)	200 CELLO (1) (2) (4)
120 CLARINET (1) (2) (4)	210 STRING BASS (1) (2) (4)
130 FLUTE (1) (2) (4)	220 OBOE (1) (2) (4)
140 TRUMPET (1) (2) (4)	230 BASSOON (1) (2) (4)
150 TROMBONE (1) (2) (4)	240 SAXOPHONE (1) (2) (4)
160 ORGAN (1) (2) (4)	250 BARITONE HORN (1) (2) (4)
170 FRENCH HORN (1) (2) (4)	260 TUBA (1) (2) (4)
180 VIOLIN (1) (2) (4)	270 PERCUSSION (1) (2) (4)

320 OPERA PRODUCTION (2)

For advanced singers in the production of opera, culminating in public performance. To be taken in conjunction with MUS 420. Prerequisite: consent of instructor.

420 OPERA COACHING (1)

Individual coaching correlative with MUS 320. One 30-minute private lesson per week. Prerequisite: current enrollment in MUS 320; assignment of a major role in the work to be staged for public performance.

441-442 PEDAGOGY (1)

Fundamental problems involved in studio teaching. Critical analysis of teaching materials. Observation and practice in private teaching required. Prerequisite: senior standing in applied music.

ENSEMBLES

Credit is subject to the regulations of the academic division in which the student is enrolled. Students who are not majoring in music may enroll with or without credit. Enrollment is open to all students in the University.

MUS 010 UNIVERSITY CHORUS (1)

MUS 020 UNIVERSITY BAND (1)

MUS 030 UNIVERSITY STAGE BAND (1)

MUS 040 UNIVERSITY ORCHESTRA (1)

MUS 050 CHAMBER MUSIC (1)

MUS 060 CLASS PIANO (1)

MUS 070 ACCOMPANYING (for pianist only) (1)

MUS 080 MEN'S GLEE CLUB (1)

MUS 090 UNIVERSITY CHAMBER SINGERS (1)

THEORY OF MUSIC

101-102-103 THEORY OF MUSIC (3)

Theoretical study of music including written exercises, form and analysis, and keyboard harmony. Required of all music majors, but open to all students of the university. Concurrently with MUS 151-152-153.

116 INTRODUCTION TO THE THEORY OF MUSIC (1)

An introductory course, open to all students in the University. A remedial course for first-year music majors; does not give credit toward any degree for a music major.

151-152-153 SIGHT SINGING AND DICTATION (1)

Required concurrently with MUS 101-102-103.

201-202-203 MUSIC THEORY (3)

Continuation of MUS 101-102-103. Part-writing, analysis, and keyboard harmony on a more advanced level. Prerequisite: MUS 101-102-103, 151-152-153. Concurrently with MUS 251-252-253.

251-252-253 SIGHT SINGING AND DICTATION (1)

Continuation of MUS 151-152-153. Required concurrently with MUS 201-202-203. Prerequisite: MUS 101-102-103, 151-152-153.

301-302-303 COUNTERPART (3)

Prerequisite: MUS 201-202-203, 251-252-253.

351-352-353 ADVANCED SIGHT SINGING AND DICTATION (1)

Prerequisite: MUS 201-202-203, 251-252-253.

401-402-403 FORM AND ANALYSIS (3)

Harmonic and formal analysis: phrases, periods, binary and ternary forms; theme and variation, rondo, sonata—allegro forms; contrapuntal forms.

421-422-423 ORCHESTRATION (2)

Tone quality and ranges of orchestral instruments; voice qualities and ranges of choral ensembles; written assignments in each area. Prerequisite: MUS 201-202-203, 251-252-253.

431-432-433 CANON AND FUGUE (3)

Introduction to the technique of canonic writing and to the composition of the fugue. Prerequisite: MUS 301-302-303.

471-472-473 COMPOSITION (3)

Creative writing in smaller forms. The purpose is to provide experience in creating original pieces in shorter forms for various media. Prerequisite: MUS 201-202-203, 301-302-303.

MUSIC HISTORY AND LITERATURE

121-122-123 SURVEY OF MUSICAL STYLES (2)

Principal types of Western music from C. 300 A.D. to the present, presented through aural analysis of technical qualities in relation to music expression.

311-312-313 HISTORY OF MUSIC (3)

History of music from the ancient and medieval periods through the baroque, classical, and romantic periods, and music of the Twentieth Century. Prerequisite: MUS 121-122-123, 101-102-103.

321-322-323 MUSIC OF THE TWENTIETH CENTURY (3)

Prerequisite: MUS 311-312-313.

331-332-333 MUSIC LITERATURE (3)

A survey or representative compositions of those composers, chiefly of the Nineteenth Century, whose works are most frequently performed in current solo, chamber, and symphonic programs. Introduces the popular masterworks to students with little or no previous musical experience. Open to all students of the University; does not give credit toward a degree for a music major.

411-412-413 VOCAL AND INSTRUMENTAL MUSIC OF WESTERN CIVILIZATION (2)

Thorough study and analysis of selected representative vocal and instrumental works from major composers of the baroque period c. 1600-1750; the pre-classical and classical period c. 1730-1830; and the romantic period c. 1820-1900, with special attention toward their stylistically appropriate performance. Prerequisite: consent of instructor.

451-452-453 PIANO LITERATURE (2)

Comprehensive study of the literature for the piano from the pre-classic era to contemporary times. Prerequisite: MUS 101-102-103, 201-202-203. Open to piano majors; other students only by consent of instructor.

461-462-463 AMERICAN MUSIC (3)

Music in the United States from 1620 to the present, with emphasis on national idioms and native composition. Prerequisite: MUS 121-122-123, 201-202-203.

481-482-483 ADVANCED STUDIES IN SPECIAL SUBJECTS (1-6)

Opportunity is offered properly qualified upperclass, graduate, and special students to pursue individual research. Approval of the department chairman is required.

MUSIC EDUCATION

145-146-147 VOICE CLASS METHODS AND MATERIALS (1)

Organization of and procedure for developing elementary, junior, and senior high school vocal groups. Evaluation of materials.

165 FUNDAMENTALS OF MUSIC FOR THE CLASSROOM TEACHER (3)

Theory, sight singing, and keyboard. Recital attendance required. For four-year elementary education majors.

215-216-217 STRING INSTRUMENTS (1)

Class instruction in the string instruments of the symphony orchestra. Survey of materials and basic approaches to string teaching.

224-225-226 BRASS AND PERCUSSION INSTRUMENTS (1)

Class instruction in brass and percussion instruments of the symphony orchestra and symphonic band.

227-228-229 WOODWIND INSTRUMENTS (1)

Class instruction and pedagogy in woodwind instruments of the symphony orchestra and symphonic band.

265 MUSIC LITERATURE FOR CHILDREN (3)

Survey of musical forms appropriate for use in the elementary classroom. Development of basic symphonic repertoire of program music. Prerequisite: MUS 165. Recital attendance required.

323-324-325 METHODS IN MUSIC: SCHOOL BANDS, ORCHESTRA, AND ENSEMBLES (2)

Technique of instrumental class instruction, materials, problems, and administration of instrumental music in public schools.

327 MUSIC IN THE FIRST SIX GRADES (3)

Rote songs, rhythmic and tonal problems in successive years. Recital attendance required. Prerequisite: MUS 165, 265.

328 MUSIC IN THE JUNIOR HIGH SCHOOL (3)

Organization and administration of music in the junior high school curriculum: vocal, instrumental, humanities, the changing voice. Prerequisite: at least a minor in music and MUS 327.

329 MUSIC IN THE SENIOR HIGH SCHOOL (3)

Organization and administration of music in the senior high school curriculum: musical ensembles, materials, problems. Prerequisite: at least a minor in music and MUS 327, 328.

335 CONDUCTING (BASIC) (2)

Fundamentals of baton technique and score reading. Prerequisite: MUS 101-102-103, 151-152-153.

336 CONDUCTING (CHORAL) (2)

Principles of baton techniques; vocal production for choral development; program building; organization of choral rehearsal and performance; testing and placement of voices with particular attention to changing voice. Prerequisite: MUS 145-146-147, 335.

337 CONDUCTING (INSTRUMENTAL) (2)

Advanced instrumental score reading and baton technique. Study of musical factors involved in training instrumental groups. Prerequisite: MUS 215-216-217, 224-225-226, 227-228-229, 335. Laboratory ensemble will be scheduled concurrently with enrollment.

410 ADVANCED STUDY IN ELEMENTARY SCHOOL MUSIC (3; max. 6)

Problems of classroom teachers; participation in musical experiences to increase teacher appreciation. For elementary teachers and supervisors. Prerequisite: student teaching or experience.

430 METHODS OF TEACHING PIANO (2)

Problems and procedures in teaching individuals and classes; evaluation of instructional material; observation of piano classes. Prerequisite: consent of instructor.

433 SUPERVISION OF SCHOOL MUSIC (2)

Selection of and research in some of the problems in vocal and instrumental teaching and supervision. Prerequisite: senior study in music.

493 ADMINISTRATION AND ORGANIZATION OF INSTRUMENTAL MUSIC IN THE PUBLIC SCHOOLS (3)

Survey of materials and organization of bands, orchestras, and ensembles. Study of curriculum and scheduling problems. Prerequisite: senior study in music.

494 PROBLEMS OF SCHOOL MUSIC (2)

Selection of and research in some of the problems in vocal and instrumental teaching and supervision. Prerequisite: senior study in music.

OFFICE ADMINISTRATION (OA)†

Assistant Professors W. Evans (Business), Tilton (Education); *Instructor* Wagley.

201 BEGINNING SHORTHAND (3)

Development of a vocabulary in Gregg Diamond Jubilee series shorthand. Not open to student with one year of high school shorthand.

202 INTERMEDIATE SHORTHAND (3)

Continued vocabulary development in Gregg shorthand. Emphasis on dictation and ability to transcribe accurately. Prerequisite: OA 201 or one year of high school shorthand, and OA 211 or equivalent.

203 ADVANCED SHORTHAND (3)

Emphasis on dictation and speed building in Gregg shorthand. Introduction to transcription. Prerequisite OA 202 or two years of high school shorthand instruction.

211 BEGINNING TYPEWRITING (2)

A mastery of the basic skills in touch typewriting. The typing of letters, reports, short tabulations, themes, etc. Open to any student with less than one year of high school typewriting instruction.

212 INTERMEDIATE TYPEWRITING (2)

Development of speed and accuracy with the introduction to production typewriting of letters, reports, tabulations, and manuscripts. Prerequisite: one year of high school typewriting instruction or OA 211.

213 ADVANCED TYPEWRITING (2)

Further development of speed and accuracy with emphasis on business letters, tabulation problems, business reports, and manuscripts. Introduction to typewritten transcription from office dictation equipment. Prerequisite: OA 212.

301 BEGINNING TRANSCRIPTION (3)

Introduction to typewritten transcription from dictation. Prerequisite OA 203 and OA 212.

302 INTERMEDIATE TRANSCRIPTION (3)

Continued development of typewritten transcription from dictation. Prerequisite OA 301.

303 ADVANCED TRANSCRIPTION (3)

A terminal course in transcription with emphasis on the ability to use a high degree of language skill. Prerequisite: OA 303.

305 OFFICE MACHINES (2)

An introduction to adding machines, rotary calculators, listing calculators, and their application to business problems. Open to any student with junior or senior standing.

401 OFFICE PRACTICUM (1-3)

Selected and supervised work experience in an office. Sixty clock hours of work for each credit. Prerequisite: junior or senior standing in office administration or business education.

402 PROBLEMS IN OFFICE ADMINISTRATION (1-3)

Research on a topic in office administration which is of particular interest to the student and which meets the approval of the department. Research is done under the guidance and direction of a staff member. Prerequisite: junior or senior standing in office administration or business education.

405 RECORDS MANAGEMENT (1)

Principles and procedures of records management and administration. Prerequisite: junior or senior standing in office administration or business education.

411 OFFICE MANAGEMENT AND ADMINISTRATION (3)

Modern offices and their operating problems. Prerequisite: junior or senior standing in office administration or business education.

† Formerly designated as SECRETARIAL STUDIES.

PHILOSOPHY (PHL)

Associate Professor Piediscalzi (Administrative Chairman); *Assistant Professor* Power (Academic Chairman); *Instructors* Beelick, Hough, Leavitt.

11, 12, 13 (11, 12) INTRODUCTION TO PHILOSOPHY (3)

Classical and contemporary philosophy.

(Note: Any quarter of PHL 11, 12, 13 may be taken first, and credit is granted for any quarter separately except in meeting Common Curriculum requirements.)

123 LOGIC (3-4)

Introduction to deductive logic and related topics.

124 SOCIAL ETHICS AND VALUES (3-4)

Analysis of fundamental values in our social order.

125 SEMANTICS: MEANING, LANGUAGE, AND COMMUNICATION (3-4)

Elementary topics in the discussion of language and the theory of communication.

ADVANCED COURSES

Prerequisite: PHL 11-12-13, or junior or senior standing.

301, 302, 303 (301, 302) HISTORY OF PHILOSOPHY (3)

Foundations of philosophical thought in Greek, Roman, and medieval times. The development of modern thought from the Renaissance to recent times.

311 ETHICS (3-4)

Survey of Oriental, Greek, Christian, and modern philosophies of life, construction of individual conception of the good life.

312 MORAL PROBLEMS (3-4)

Discussion of problems of the good life, including happiness, duty, conscience, economic and penal justice, marriage, patriotism, war, etc.

323 SYMBOLIC LOGIC (3-4)

Standard notations, principles of inference, formal systems, methods of proof. Chief attention to first-order predicate logic. Prerequisite: three credit hours of logic or consent of instructor.

331 POLITICAL PHILOSOPHY (3-4)

Language of government and community action and traditional arguments in political philosophy.

341 AESTHETICS (3-4)

Philosophy of criticism, and such topics as appreciation, the nature of the work of art, beauty, significance of the special arts.

351 GREAT SCIENTISTS AND RECENT PHILOSOPHY:

DARWIN, MARX, FREUD, EINSTEIN (3-4)

Details concerning the impact of great scientists on philosophical thought on values.

371 BUSINESS ETHICS (3)

Case study and discussion of ethical issues involved in business transactions and management.

392 PHILOSOPHY OF RELIGION (3-4)

Inquiry into major philosophical problems relating to religion, and critical examination of selected philosophical issues that arise from the cross-cultural studies of historic and secular religions as well as from the inter-disciplinary studies of religion such as the psychology, sociology, and anthropology of religion.

405 SCIENCE AND CULTURE (3-4)

Prerequisite: senior standing. Not open to majors in philosophy.

406 HISTORY, LITERATURE, AND THE SOCIAL SCENE (3-4)

Prerequisite: senior standing. Not open to majors in philosophy.

411 ADVANCED ETHICAL THEORIES (3-4)

Critical analysis of the good and the right according to classical and contemporary theories. Additional prerequisite: PHL 311 or 312 or 313.

The following courses require 18 credit hours of philosophy or approved related subjects. At least eight hours must be in advanced courses.

431 PLATO (3-4)

Alternates with 434, 435, and 436.

434 ARISTOTLE (3-4)

435 DAVID HUME (3-4)

Theories of understanding, morals, and religion.

436 KANT (3-4)

Critical philosophy: science, ethics, and religion.

437 MODERN IDEALISM (3-4)

Major issues and themes, emphasis upon contemporary relevance.

442 PHILOSOPHY OF LITERATURE (3-4)

Prerequisite: 18 hours of literature, at least nine of which are advanced, or consent of instructor.

461 RUSSELL (4)

Introduction to his philosophy. Alternates with 462, 464, and 465.

462 PIERCE, JAMES, DEWEY, AND LEWIS (4)

Detailed study of Pragmatism.

463 WITTGENSTEIN (3)

An introduction to the linguistic approach to philosophy and Wittgenstein's thesis that philosophical problems result from a fundamental misunderstanding of the workings of our language.

464 EXISTENTIALISM (4)

Representative writers of the Existentialist movement.

465 ANALYSIS (4)

Recent analytic philosophy with attention to types of problems and methods of analysis employed to the nature of results achieved.

466 WHITEHEAD (4)

Critical study of Whitehead's metaphysics, value-theory, and philosophy of science, religion, art.

471 PHILOSOPHY OF PHYSICAL SCIENCE (4)

Prerequisite: 18 hours of natural science, mathematics or philosophy, at least nine of which are advanced.

472 PHILOSOPHY OF SOCIAL SCIENCE (4)

Prerequisite: 18 hours of social science, at least nine of which are advanced, or PHL 471.

481-482 INDEPENDENT READING (4)

495* METAPHYSICS (4)

World views and categorical analysis.

496* EPISTEMOLOGY (4)

Origin, certainty, and extent of human knowledge.

PHYSICAL EDUCATION (PE)

Instructors Knight, McPeak.

281 PHYSICAL EDUCATION FOR THE ELEMENTARY SCHOOL (3)

Curriculum and materials for elementary school physical education with emphasis on ob-

jectives, evaluation, planning, resources and facilities, and curricular trends. (Required of all students preparing to teach in the elementary school.)

PHYSICS (PHY)

Professors Hanson (Chairman), Martin; *Assistant Professors* Carpenter, Hemsley, Listerman, Wolfe, Wood.

11-12-13 COLLEGE PHYSICS (4)

Fundamental principles and laws analyzed and applied to the solutions of problems met in nature and the laboratory. Meets minimum premedical requirements in physics. Prerequisite: MTH 102 or equivalent high school preparation. 2 lect. 1 rec. 1 lab.

50-51-52 CONTEMPORARY CONCEPTS IN PHYSICS (1)

Modern physics is discussed with the emphasis placed on recent developments. Topics range from astrophysics to molecular and nuclear physics. 1 lect. Prerequisites: none.

109 GENERAL PHYSICS (4)

A course in selected topics in mechanics and electricity and magnetism. Designed to follow PHY 11-12-13 and prepare students for PHY 221. Prerequisite: PHY 13 and completion or current registration in MTH 232. 4 lect.

140-141-142 GENERAL PHYSICS (5)

For science and engineering students. A study of the elements of mechanics, heat, sound, electricity and magnetism, and optics. Emphasis is on the utilization of calculus in the interpretation of physical phenomena. Prerequisite: prior completion of or current registration in MTH 132 for PHY 140. Prior completion of or current registration in MTH 133 for PHY 141-142. 3 lect. 1 rec. 1 lab.

170-171-172-173 GENERAL PHYSICS (4)

Same as PHY 140-141-142. Open primarily to the evening student. Prerequisite: MTH 132 for PHY 170-171. MTH 133 for PHY 172-173. 3 lect. 1 lab.

ADVANCED COURSES

211-212 INTERMEDIATE PHYSICS LABORATORY (1)

Laboratory problems at the sophomore level. A laboratory course in which the student has the opportunity to acquaint himself with a wide variety of measurement techniques in but not limited to the following fields: fundamental constants, electrical measurements including AC and RF, and atomic and nuclear physics. The student is expected to perform four to five of the experiments in a quarter with a written report including an error analysis and development of the relevant theory. Prerequisite: PHY 230 or consent of department. 1 lab.

221-222 ANALYTICAL MECHANICS (3)

Intermediate problems in statics, kinematics, and dynamics: the study of equilibrium of forces, rectilinear motion, curvilinear motion, central forces, constrained motion, energy and moments of inertia, and the LaGrange method. Prerequisite: PHY 142. Corequisite MTH 233. 3 lect.

230 INTRODUCTION TO MODERN PHYSICS (4)

An elementary introduction to the phenomenology and theoretical concepts of modern physics. Special theory of relativity and the quantum theory. Atomic and molecular structure and spectra. X-rays and solid state physics. Nuclear structure, reactions, and natural radioactivity. Instrumentation for nuclear physics research. Prerequisite: PHY 142, MTH 231. 3 lect. 1 lab.

310-311-312 ADVANCED PHYSICS LABORATORY (2) (2) (1)

Laboratory problems at the junior-senior level. A laboratory course in which the student performs more detailed and accurate measurements than the usual laboratory. Topics include modern physics, spectroscopy, and similar fields. The topics which may be covered are the same as in PHY 211-212 but more elaborate precautions for highest accuracy is expected. Prerequisite: junior standing in physics. 2 or 1 lab.

320 THERMAL PHYSICS I (3)

First and second laws of thermodynamics; general thermodynamic formulas with applications to matter. Prerequisite: PHY 222. 3 lect.

350-351-352 ELECTRICITY AND MAGNETISM (3)

The fundamental laws of electricity and magnetism presented from the viewpoint of field theory. Maxwell's equations, transient and steady state currents, electric and magnetic properties of matter, electromagnetic radiation. Prerequisite: PHY 142, MTH 233. 3 lect.

421* THERMAL PHYSICS II (3)

Kinetic theory of gases. Maxwell-Boltzmann statistics, introduction to quantum statistics. Prerequisite: PHY 320. 3 lect.

430*† ELECTRONICS (2-4)

A study of the basic theory and applications of tubes and transistors in present day circuitry as found in research instrumentation. Prerequisite: PHY 140-141-142 or equivalent.

442* PHYSICAL OPTICS (3)

A study of the interaction of light and matter and the interpretation of these phenomena using both the wave nature and the quantum theory of light. Includes interference, diffraction, absorption, scattering, and polarization. Prerequisite: PHY 352, MTH 333. 3 lect.

460*-461*-462* MODERN PHYSICS (3)

A detailed study of many aspects of modern physics including relativity, quantum mechanics, atomic structure and spectra, x-rays, nuclear structure and reactions, fundamental particles, and cosmic radiation. Prerequisite: PHY 222, 352, MTH 333. 3 lect.

480-481-482 INTRODUCTION TO THEORETICAL PHYSICS (3)

A survey of the field of theoretical physics. Vector analysis, mechanics, hydrodynamics, thermodynamics, electromagnetism, quantum mechanics, and statistical mechanics. Prerequisite: PHY 222, 352, MTH 333, and consent of department. 3 lect.

488 INDEPENDENT READING (1-3)

Repeatable. Prerequisite: consent of the department. PHY 140-141-142 or equivalent.

494 SENIOR LABORATORY (2)

Selected problems in experimental and theoretical physics with critical analysis of the results. Prerequisite: senior standing in physics. 2 lab. repeatable.



499 SPECIAL RESEARCH PROBLEMS (2)

Special research in a recognized branch of physics, usually related to the research carried on by the department. A critical analysis of the results is required. Prerequisites: senior standing in physics, consent of department. 2 lab. repeatable.

500†-501†-502† MATHEMATICAL PHYSICS (3)

A survey of the field of mathematical physics including vector analysis, analytical mechanics, electromagnetism and thermodynamics. Prerequisite: consent of the department.

504†-505†-506† PHILOSOPHY OF PHYSICS (3)

The various areas of physics are studied with regard to their historical and philosophical basis in modern physical theory. Prerequisite: consent of the department.

510-511-512 QUANTUM MECHANICS (3)

An introduction to non-relativistic quantum mechanics. Early quantum theory, Schrodinger's equation. Matrix mechanics. Applications to simple atomic and nuclear systems. Prerequisite: consent of the department.

520 STATISTICAL PHYSICS (4)

Law of thermodynamics and the development of statistical mechanics. Macroscopic and Microscopic applications to physical systems. Classical and quantum statistics. Fluctuation phenomena. Prerequisite: consent of the department.

530-531-532 SOLID STATE PHYSICS (3)

An introduction to the physics of solids. Lattice dynamics; thermal, electrical, and mechanical properties. Free electron and band theories of solids. Prerequisite: Bachelor of Science degree in physics or consent of department. 3 lect.

540-541-542 NUCLEAR PHYSICS (3)

Introductory methods in nuclear physics. Elementary concepts and simple considerations about nuclear forces, alpha and beta decay, nuclear structure. Phenomenological treatment of nuclear reactions and decay processes. Prerequisite: consent of the department.

551 ATOMIC SPECTRA AND STRUCTURE (4)

Modern theory of the atom and quantum mechanical treatment of the origin of atomic and x-ray spectra. Prerequisite: consent of the department.

562 MOLECULAR SPECTRA AND STRUCTURE (4)

Theory of molecular spectra and structure with examination of experimental data as related to molecular spectra. Prerequisite: consent of the department.

580-581-582 THEORETICAL PHYSICS (3)

A survey of the field of theoretical physics. Vector analysis, mechanics, hydrodynamics, thermodynamics, electromagnetism, quantum mechanics, and statistical mechanics. This course is the same as PHY 480-481-482 with the graduate student being required to do additional library projects and problem sets. Prerequisite: consent of department. 3 lect.

599 MINOR PROBLEMS (1-5)

A course to enable the student to pursue a topic on a tutorial basis. Not to be used for thesis credit. Repeatable. Prerequisite: consent of the department.

600 SEMINAR (1)

Weekly discussions of current problems in physics. Centered about regular student presentations. Prerequisite: consent of the department. Repeatable.

699 RESEARCH (1-6)

A course designed to give a properly qualified student an opportunity for study or laboratory work in a specialized field of interest. This course will normally be used for thesis preparation. Repeatable.

†Not available for graduate credit toward the MS degree in Physics.

POLITICAL SCIENCE (PS)

Professor Smith (Chairman); Assistant Professors Hutzler, Thobaben; Instructors Adams, Eskow, Weng.

11 INTRODUCTION TO POLITICAL SCIENCE (3)

An introduction to the nature and scope of political science; the role and function of political systems; and the nature of political power.

12-13 AMERICAN GOVERNMENT (3)

The introductory course for the study of the political behavior, institutions, processes and problems of the American political system. It may not be taken out of sequence except under unusual circumstances and with the consent of the department chairman. Prerequisite: P.S. 11.

22, 23 INTERNATIONAL POLITICS (3)

A study of the actors, dynamics, strategies, and systems of politics at the international level with emphasis on the struggle for power. May be taken out of sequence. Prerequisite: P.S. 11.

ADVANCED COURSES

Open to those who have had nine quarter hours of political science or with permission of the instructor.

225 METROPOLITICS (3)

Governments and politics of metropolitan regions; government structure and functions; interest and power relations; politics and problems of urban areas.

304 CONTEMPORARY POLITICAL THOUGHT: DEMOCRACY, FASCISM AND NATIONALISM (3)

A systematic analysis of the major political ideologies of the Twentieth Century, with particular attention to democracy, fascism and nationalism.

305* CONTEMPORARY POLITICAL THOUGHT: COMPARATIVE MARXIST THEORY (3)

A critical examination of the chief theories developed by Marx, Engels, Lenin, Stalin, Mao Tse-tung, Castro and various revisionists. Special emphasis will be placed on Soviet and Chinese ideologies.

321 THE AMERICAN PRESIDENCY (3)

The evolution of the president as a policy leader. An analysis of the varied functions and roles associated with the presidency; the limits and opportunities of presidential power.

322 THE LEGISLATIVE PROCESS (3)

An examination of legislative functions in the making of public policy in the United States. Primary attention given to Congress but including comparative analysis of American state and non-American legislative bodies.

325 STATE GOVERNMENT (3)

A survey and analysis of the structures and functions of the American states, with special attention to the problems of Federal-State and State-local relations, legislative apportionment, and urban growth.

340 (417) LAW AND SOCIETY (3)

Theories of law; the nature and functions of the judicial process.

345 (315) PUBLIC ADMINISTRATION (3)

Nature and scope of public administration; administrative law; public interest in the administrative process.

351 POLITICAL SYSTEMS OF WESTERN EUROPE (3)

An introduction to the study of comparative politics with the focus on the political systems of Great Britain, France and West Germany.

371 PROBLEMS AND TRENDS IN INTERNATIONAL POLITICS (3)

Various views and perspectives on selected contemporary problems and trends in international politics.

401* CLASSICAL AND MEDIEVAL POLITICAL THOUGHT (3)

A critical examination of political ideas from 500 B.C. to 1600 A.D. with special attention to those of Plato, Aristotle, Cicero, St. Augustine, St. Thomas Aquinas, Luther, Calvin, and Machiavelli.

402* MODERN POLITICAL THOUGHT (3)

A critical examination of political ideas from 1600 to 1900, with special attention to those of Hobbes, Locke, Rousseau, Montesquieu, Hume, Burke, Hegel, Bentham, Marx, and Mill.

407 SENIOR SEMINAR ON POLITICAL THEORY (3)

Readings, research, reports and discussion on selected theorists, topics and problems.

410 SEMINAR IN METHODOLOGY (3)

Techniques and methods relating to research in political science; traditional and behavioral approaches to the study of political phenomena; application to individual projects and research design.

420 SEMINAR ON THE AMERICAN POLITICAL SYSTEM (3)

Selected topics related to the operation and continuing evolution of the American political system; contemporary policy issues; institutional trends and problems; emphasis on discussion, readings and research.

425, 426 SEMINAR IN METROPOLITAN AND REGIONAL DEVELOPMENT (3)

Intensive interdisciplinary treatment of metropolitan and regional development. Reading and discussion on pertinent theory, methodology, and case studies. Practical research by students.

427* (441) GOVERNMENT OF OHIO (3)

Organization and functions of the government of Ohio, with special attention to development, social structure, legal status, electoral processes, and fiscal problems.

428 GOVERNMENTAL ASPECTS OF CITY PLANNING (3)

The institutional and political context of planning; laws, governmental structures, and procedures; urban politics.

431 POLITICAL PARTIES (3)

The development of the American political party system; functions of parties in democratic systems; nomination and election processes in the United States.

432 PUBLIC OPINION (3)

The opinion formation process in democratic and non-democratic systems; primary concern for the relationship of public opinion to public policy in American government; the role of pressure groups and the mass media in the stimulation and transmission of public opinion; an examination of opinion measurement techniques and an evaluation of their significance.

440* (432) CONSTITUTIONAL LAW (3)

Cases in which provisions of the Constitution have been judicially interpreted: federal system; separation of powers; limits on government.

441* (447) CIVIL LIBERTY AND THE LAW I (3)

Cases and related materials on the Bill of Rights and the Fourteenth Amendment; emphasis on the First Amendment freedoms.

442* (447) CIVIL LIBERTY AND THE LAW II (3)

Cases and related materials on the Bill of Rights and the Fourteenth Amendment; emphasis on the nature of due process, criminal rights, and equal protection of the law.

443 (432) ADMINISTRATION LAW (3)

The law of public officers; types of powers exercised by administrative authorities; scope and limits of such powers, including relevant aspects of procedural due process and remedies against administrative action.

445 PUBLIC PERSONNEL ADMINISTRATION (3)

Methods of employment, training, compensation, and employee relations in various levels of civil service; organizations of public employees.

446 PROBLEMS IN PUBLIC ADMINISTRATION (3)

Selected problems, national, state, and local; emphasis on legal scope of administrative power and on research methods used by staff agencies.

453 POLITICAL SYSTEM OF THE SOVIET UNION (3)

Analysis of the Soviet system with emphasis on the development of the Communist Party. Special attention to Soviet foreign policy.

460 SENIOR SEMINAR ON COMPARATIVE POLITICAL SYSTEMS (3-9)

Readings, research, reports, and discussion on selected topics and problems.

461 (301) POLITICAL SYSTEM OF CHINA (3)

Analysis of Chinese (Communist and Nationalist) political structures and processes with special attention to the dynamic factors of socio-economic and political development in China.

462 (301) POLITICAL SYSTEMS OF JAPAN AND KOREA (3)

Analysis of the political structures and processes of Japan and Korea, with special attention to the dynamic factors of socio-economic development in each case.

463 (302) POLITICAL SYSTEMS OF SOUTHEAST ASIA (3)

A survey and comparative analysis of selected Southeast Asian nations' political systems, with special attention to integrative and disintegrative forces, and the role of great powers in the region.

470 SENIOR SEMINAR ON INTERNATIONAL RELATIONS (3-9)

Readings, research, reports, and discussion on selected topics and problems.

471 (321) INTERNATIONAL LAW (3)

Rules governing the conduct of international relations in times of war and peace.

472 (321) INTERNATIONAL ORGANIZATION (3)

Analysis of the developing structures and functions of the United Nations and other international organizations, and the concepts relating to world government.

480 (412) AMERICAN FOREIGN POLICY (3)

Institutions and procedures in the formulation and execution of foreign policy; role of intelligence in foreign affairs; organizations for national security and administration of foreign economic aid.

490, 491, 492 INDEPENDENT READINGS (3)

Supervised individual study and readings on selected topics. Should be arranged between the student and that faculty member under whom he wishes to study.

493, 494 CONTEMPORARY PROBLEMS (3)

Supervised individual projects. May involve intern programs in local government or other special programs. Should be arranged between the student and that faculty member under whom he wishes to study.

PSYCHOLOGY (PSY)

Professors Kemp (Chairman), Klein; *Assistant Professors* Deaux, Evans, Smith; *Instructors* Baird and Kruger; *Lecturers* Chambers, Christensen, Topmiller, Warrick.

11, 12, 13 INTRODUCTORY PSYCHOLOGY (3)

An introduction to basic concepts in the study of human behavior and experience.

ADVANCED COURSES

PSY 11, 12, 13 or special permission of the instructor are minimum prerequisites for all advanced psychology courses.

211 BEHAVIORAL STATISTICS (4)

An introduction to the principles and techniques of statistical analysis, with emphasis on applications to psychological problems.

212-213 EXPERIMENTAL PSYCHOLOGY (4)

A laboratory course designed to familiarize the student with the methods of experimental psychology. First quarter: Experimental work in the sensory, perceptual, and motor processes. Second quarter: Experimental work in learning, problem solving, and animal psychology. (2 lectures, 75 minutes each and 1 laboratory session of 2½ hours per week) Prerequisite, PSY 211.

321 INDUSTRIAL PSYCHOLOGY (4)

Scientific psychological principles, procedures, and methods applied to human performance efficiency in industry. Open to engineering and business students with prior credit in business, mathematical, or behavioral statistics.

325 SOCIAL PSYCHOLOGY (4)

The study of the behavior of individuals as it is influenced by past and/or present interactions with social factors.

331 PERSONALITY AND ADJUSTMENT (4)

Study of the development of normal personality, including problems of adjustment and integration.

341 CHILD AND ADOLESCENT PSYCHOLOGY (4)

Fundamentals of normal child and adolescent development.

361-362 INTRODUCTION TO MOTIVATION AND LEARNING (4)

Experimental findings and contemporary theories of: (361) motivation of behavior; and (362) learning and conditioning.

371-372 SENSATION AND PERCEPTION (3) (3)

A course describing and explaining the physiology and phenomena of sensation and perception. Prerequisite: PSY 212 or consent of instructor.

375-376 PHYSIOLOGICAL PSYCHOLOGY (4)

Survey of the physiological mechanisms of behavior. Emphasis on action and the integration of behavior, motivation, emotion, and learning. PSY 375 must be taken before 376.

385 QUANTITATIVE PSYCHOLOGY (4)

The quantification of human behavior, including scaling techniques.

421* ENGINEERING PSYCHOLOGY (4)

The application of psychology to equipment design and man-machine relationships. Open to engineering and business students of advanced standing without PSY 11, 12, 13.

425* EXPERIMENTAL METHODS IN SOCIAL PSYCHOLOGY (4)

A survey of experimental methods as it is applied to social psychological problems. Provides experience in both laboratory and field techniques. Prerequisites: PSY 212, 213, and 325 or consent of instructor.

431* THEORIES OF PERSONALITY (4)

Contemporary theories of the development, organization and dynamics of personality. Prerequisite: PSY 331 and advanced standing or consent of instructor.

433* EXCEPTIONAL CHILD (4)

Problems of retarded, gifted, physically handicapped, and emotionally disturbed children.

435* ABNORMAL PSYCHOLOGY (4)

Causes, symptoms, influence, and prevention of abnormal behavior and their relation to normal behavior. Field trips to appropriate local institutions. Prerequisite: four credit hours of advanced psychology.

441* DEVELOPMENTAL PSYCHOLOGY (4)

Cognitive, perceptual, and symbolic changes manifested in childhood and adolescence. Prerequisite: PSY 341.

443* TESTS AND MEASUREMENTS (4)

A survey of the basic principles, problems, and techniques of psychological testing with special emphasis on test construction, interpretation, and usage. Prerequisite: PSY 211, 212 and 213 or consent of instructor.

455* PSYCHOLOGY OF LANGUAGE (4)

A survey of experimental findings in the areas of animal communication and human language with special emphasis on their implications for current theories of language. Includes production and reception of speech, acoustic signal, speech mechanism, personality and speech behavior, development and deficiencies, and communication. Open to speech students of advanced standing without PSY 11-12-13.

461* HUMAN LEARNING (4)

Phenomena, principles, and problems of learning and retention. Prerequisite: PSY 362 or consent of instructor.

465* MEMORY (4)

A survey of experimental findings in animal and human memory with emphasis on their implications for current theories of memory. Prerequisite: PSY 212-213.

471* PERCEPTION (4)

Selected problems in perceptions with emphasis on rheoretical interpretations. Prerequisite: PSY 372 or consent of instructor.

473* SENSORY PROCESSES (4)

A survey of the basic physiology of the senses and the peripheral nervous system. Emphasis is on receptor mechanisms and neural coding processes. Prerequisite: PSY 371 or 375 or consent of instructor.

478* ANIMAL BEHAVIOR (5)

The physiology, phylogeny, and ontogeny of behavior. Prerequisite: either BIO 11, 12, 13 and 302, or PSY 11, 12, 13 and 212; and consent of instructors. Field trips are planned. Also listed as BIO 478.

481* HISTORY OF PSYCHOLOGY (4)

Major trends in the development of psychology from its beginning to the present. Prerequisite: PSY 212-213 or consent of instructor.

485* INTERMEDIATE STATISTICS (4)

Statistical methods and interpretations encountered in experimental studies and presentations of behavioral data. Prerequisite: PSY 211.

488, SEMINAR IN SPECIAL TOPICS (1-4)

Variable content. Specific topics of the course will be announced in the schedule when course is offered. Prerequisite: advanced standing in psychology or related field and consent of instructor.

499 SPECIAL PROBLEMS IN PSYCHOLOGY (1-3)

Original problems for investigation. Prerequisite: consent of instructor who is selected by the student.

525* ATTITUDE STRUCTURE AND CHANGE (4)

Study of attitudes as a social psychological concept, including problems of measurement, empirical findings, and rheoretical models. Prerequisite: PSY 325 or consent of instructor.

527* SMALL GROUPS (4)

Current theory and research in selected areas of small groups, including communications, group norms and conformity, group structure, leadership. Prerequisite: PSY 321 or consent of instructor.

529* INTERPERSONAL RELATIONS (4)

A laboratory group for the study of interpersonal relations, in which the group determines the goals and the means of goal achievement and then proceeds toward that goal. Prerequisite: advanced standing and consent of instructor.

561* ADVANCED MOTIVATION (4)

A survey of experimental findings in animal and human motivation with emphasis on their implications for current theories of motivation. Prerequisites: PSY 211, 212, 213 and 361-362 or consent of instructor.

562* ADVANCED LEARNING (4)

A survey of experimental findings in animal and human learning with emphasis on their implications for current theories in learning. Prerequisites: 211, 212, 213 and 361, 362 or consent of instructor.

575* NEUROPSYCHOLOGY (4)

Intensive laboratory involvement with the instrumentation and surgical techniques used in physiological psychology including: GSR, EMG, EKG, and EEG recordings; animal behavioral changes produced by electrical stimulation of the brain and/or lesions of brain structures. Prerequisite: PSY 375-376 or consent of instructor.

RELIGION (REL)

Associate Professor Piediscalzi (Chairman); Assistant Professors Friedland, Kim, Reece.

11, 12, 13 RELIGION IN HISTORY AND CULTURE (3)

An introduction to the historical development and cultural functions of selected religious traditions, e.g., Hinduism, Buddhism, Confucianism, Judaism, Christianity, and Islam. (11) Selected Eastern Religions. (12) Selected Western Religions. (13) Contemporary Issues in Eastern and Western Religions. Students may enter at any quarter of the sequence.

200 (101) LITERATURE AND RELIGION OF ANCIENT ISRAEL (OLD TESTAMENT) (3)

Introduction to the literature, history, and religion of Ancient Israel.

201 (341) POST-BIBLICAL JUDAISM (3)

Introduction to the varieties of literature and religion in Jewish sects from the Exile (C. 500 B.C.E.) to the publication of the Mishnah of Judah the Prince (200 C.E.), including the Dead Sea Scrolls.

202 (112) LITERATURE AND RELIGION OF THE NEW TESTAMENT (3)

Introduction to the literature, history, and religion of early Christianity.

220 (321) THE RELIGIOUS HERITAGE OF THE EAST (3)

A general introduction to the religious heritage of the East manifested in the beliefs, values, symbols, practices, and institutions of Hinduism, Buddhism, Confucianism, Taoism, and Shintoism.

272 (372) RELIGION AND SOCIETY (3)

A problem-centered study of major alternative religious approaches to society and of the principal views regarding the relation between religion and society.

307 THE DEVELOPMENT OF JEWISH THOUGHT (3)

The formation of Jewish thought after the close of the biblical period is traced from the Talmudic age through Philo and representative medieval thinkers down to the molders of contemporary Jewish philosophy. Prerequisite: consent of instructor.

310, 311, 312 HISTORY OF WESTERN RELIGIOUS THOUGHT (3)

Historical survey of the intellectual development in Western religion. Selected readings in important thinkers and in comprehensive secondary works. Prerequisite: consent of instructor.

351 MEDIEVAL INSTITUTIONS (3)

(See HST 351.)

352 RENAISSANCE AND REFORMATION (3)

(See HST 352.)

374 SOCIOLOGY OF RELIGION (3)

(Offered jointly with the Sociology Department: see Soc. 374). A general treatment of religion, examining the influence of religious ideas and institutions on other social institutions and the influence of society upon religion. Prerequisite: consent of instructor.

375-376 A HISTORY OF CHRISTIAN ETHICS (3)

(375) An examination of representative approaches to the ethics which have appeared in the history of the Christian community from the New Testament period to 1850. Special attention will be given to the relation of theological ideas to conceptions of political, family, economic, and social life. (376) The issues raised in the preceding course will be examined in the ethical thought of representative theologians from the Social Gospel to the present. Recurring themes, such as the categories of "Love" and "Justice," and certain current theoretical issues, such as the function of norm and context in moral deliberation, will be organizing principles for analyzing the writings of these men. Prerequisite: consent of instructor.

392 PHILOSOPHY OF RELIGION (3)

(Offered jointly with the Philosophy department: see PHL 392.) A critical examination of selected philosophical issues that arise from the cross-cultural studies of historic and secular religions as well as from the inter-disciplinary studies of religion such as the psychology, sociology, and anthropology of religion. Prerequisite: junior standing or consent of instructor.

400* (500) SEMINAR IN RELIGION (3)

Topics chosen by the department. Prerequisite: consent of instructor.

417* EVOLUTION (3)

(Taught jointly with the Biology Department: see BIO 417.) An introduction to the biological, philosophical, theological, and ethical aspects of the concept of evolution. Prerequisite: consent of instructor.

421* CONTEMPORARY WESTERN RELIGIOUS THOUGHT (3)

A study of major schools and selected figures in contemporary western religious thought. Prerequisite: consent of instructor.

422* CONTEMPORARY EASTERN RELIGIOUS THOUGHT (3)

A study of major schools and selected figures in contemporary eastern religious thought. Prerequisite: consent of instructor.

441* ISLAM (3)

A study of the origin and development of Islam including contemporary issues and problems. Prerequisite: junior standing or consent of instructor.

442* HINDUISM (3)

A study of the origin and development of Hinduism and its impact upon various aspects of Indian society and culture from the ancient times to the present day. Prerequisite: junior standing or consent of instructor.

443* BUDDHISM AND ASIAN CULTURE (3)

A study of Theravada Buddhism and Mahayana Buddhism in various Asian countries as they have been expressed in art, philosophy, social thought, folk tradition. Prerequisite: junior standing or consent of instructor.

444* RELIGIONS IN CHINA (3)

A study of three major religions, i.e., Confucianism, Taoism, and Buddhism in China, with respect to their origins, historical developments, impact upon society and culture, present issues. Prerequisite: junior standing or consent of instructor.

445* RELIGIONS IN JAPAN (3)

A study of Japanese religious traditions such as Shintoism, Confucianism, Buddhism, which have played important roles in the life of the Japanese people. Prerequisite: junior standing or consent of instructor.

450, 451, 452 UNDERGRADUATE RESEARCH IN RELIGION (1-3)

Intensive consideration of problems and issues in a given area of the study of religion to be determined in consultation between student and department.

460* (422) THE RELIGIOUS QUEST IN CONTEMPORARY LITERATURE (3)

(Taught jointly with the English department: see Eng. 460.) An examination of the explicit and implicit religious and ethical positions which are found in the works of selected contemporary authors, e.g., Baldwin, Böll, Beckett, Camus, Faulkner, Salinger, Sartre, Updike, and Wiesel; and an introduction to various critical approaches to literature. Prerequisite: consent of instructor.

471 HISTORY OF RELIGION IN AMERICA (3)

(See HST 471.)

476, 477 CONTEMPORARY RELIGIOUS ETHICS (3)

An examination of some of the major issues and problems in contemporary religious ethics; (476) Western, and (477) Eastern. Prerequisite: consent of instructor.

481, 482, 483 INDEPENDENT READING (3)

501*, 502*, 503* (600) READING AND RESEARCH IN RELIGION (2-4)

Intensive research in specialized areas. Prerequisite: a minimum of 30 hours of advanced work in religion or approved related courses; related courses must be approved by the chairman of the department.

HONORS PROGRAM IN RELIGION: available for junior and senior religion majors and students with an adequate background in religion who achieve an accumulative 3.0 grade point average. For further details contact the chairman of the department.

RUSSIAN (RUS)—See MODERN LANGUAGES

SECRETARIAL STUDIES—See OFFICE ADMINISTRATION

SOCIOLOGY and ANTHROPOLOGY (SOC)

Assistant Professors Islam, Lieberman; *Instructors* Lowe, Murray, Thatcher.

11-12-13 INTRODUCTORY SOCIOLOGY (3)

Principles and problems of normal social life. Students must enter 11 first. For the final quarter, Sociology 23 or an elective in the department may be taken.

21, 22, 23 GENERAL ANTHROPOLOGY (3) (Anthropology)

Survey of physical (21), archaeological (22), and cultural (23) studies of man. Students may enter at any term.

ADVANCED COURSES

Advanced courses require at least six hours in either introductory Sociology or General Anthropology.

252 INTRODUCTION TO NORTH AMERICAN ARCHAEOLOGY (3-4) (Anthropology)
Archaeological finds with emphasis on the Ohio Valley.

253 INDIANS OF NORTH AMERICA (3-4) (Anthropology)
Culture areas and cross-cultural characteristics of the North American Indian.

257 POPULATION (3)

Population theory, characteristics, migration, vital rates, growth, and policies.

301 SOCIAL PROBLEMS (3)

Definition, extent, and prevention of selected social problems, in the United States.

312 INDUSTRIAL SOCIOLOGY (3)

Cross-cultural analysis of industrialization; organization of relationships within industrial social groups.

322 MIDDLE AMERICAN CULTURES (3-4) (Anthropology)

Ethnographic survey of cultural history and present day societies of Mexico, Central America, and the West Indies.

323 SOUTH AMERICAN CULTURES (3-4) (Anthropology)

Descriptive survey of contemporary South American societies and their cultural history.

331 FOLK AND URBAN SOCIETIES (3-4) (Anthropology)

Analysis of contemporary western civilization in contrast to cultures of folk societies.

341 SOCIAL WORK (3) (Social Work)

History, principles, and survey of modern social work. For prospective social workers.

342 SOCIAL WORK PROCESSES (3) (Social Work)

Analysis of fields, theories, and techniques. Juniors and Seniors only. Prerequisite: Soc 341 or consent of instructor.

343 THE AMERICAN COMMUNITY (3)

Examination of various types of communities in America and the major sociological theories concerning the community

344 COMMUNITY WELFARE ORGANIZATION (3) (Social Work)

Methods for recognizing and meeting the social welfare needs of communities.

345 SOCIAL ANTHROPOLOGY (3-4) (Anthropology)

Comparative analysis of aboriginal and modern social structures.

347 SOCIOLOGY OF CITIES (3)

Ecological analysis of urban life; special reference to large cities in the United States.

348 AMERICAN MINORITY PROBLEMS (3)

Description and analysis of their emergence and trends in modern times.

352 CRIMINOLOGY (3)

A survey of crime, some casual theories, and attempts at prevention in the United States.

353 JUVENILE DELINQUENCY (3)

Problems of definition and treatment of delinquency and preparation for further study of work with the delinquent child.

354 SOCIAL CASE WORK (3) (Social Work)

Theory and practice with emphasis upon psycho-social diagnoses. Prerequisite: Soc 341.

355 SOCIAL GROUP WORK (3) (Social Work)

Principles, concepts, and practices of modern group work. Records of actual experience uses as illustrative material.

356-357 GROUP DYNAMICS AND LABORATORY (3) (Social Work)

Application of theory and dynamic principles.

361 FAMILY AND MARRIAGE (3)

Analysis of United States family behavior, stressing courtship, marriage, child rearing, and marital tensions.

362 THE FAMILY IN CONTEMPORARY SOCIETY (3)

Sociological analysis of development of the family, its relationship to society, and its contribution to personality.

372 ARCHAEOLOGICAL FIELD TECHNIQUES (3) (Anthropology)

Classroom and laboratory preparation for archaeological excavations.

373 ARCHAEOLOGICAL FIELD STUDY (6-9) (Anthropology)

Excavation training on prehistoric sites. Summer only. Prerequisite: Sociology 21, 22, 23 or consent of instructor.

374 SOCIOLOGY OF RELIGION (3)

A general treatment of major sociological theories of religion, examination of the influence of religious ideas and institutions on other social institutions, and the influence of society upon religion. To be offered by religion department for joint credit in both departments.

376 THE HISTORY OF SOCIOLOGICAL THOUGHT (5)

A historical study of the emergence and development of sociological thought from the time of Adam Smith and Comte to the Twentieth Century with emphasis upon the basic writings of Adam Smith, Comte, Spencer, Marx, Durkheim, Weber, and Simmel. Prerequisite: Nine hours of Sociology.

381 LABORATORY OF THE HUMAN SKELETON (4) (Anthropology)

Identification of human bones and investigation of their functions.

382 FOSSIL EVIDENCE FOR HUMAN EVOLUTION (3-4) (Anthropology)

History, description, and interpretation of fossil man discoveries.

383 PRIMATE STUDIES (3-4)

Trace possible evolutionary lines between man and other primates.

402 SOCIAL FACTORS IN PERSONALITY (3)

Analysis of relationships between social structure and personality.

403 SOCIAL WELFARE AS A SOCIAL INSTITUTION (3) (Social Work)

Understanding of social welfare as a social institution. Evaluation of the impact of social welfare policies and programs for individual well being and human welfare.

406 METHODOLOGY AND TECHNIQUES OF SOCIOLOGY (5)

An examination of theoretical, philosophical, and practical issues of sociological investigation. The study of statistical and sampling procedures related to sociological sources of data.

411 SOCIAL CONFLICT (3)

Historical sociological description and analysis of conflict theories.

412, 413, 414 PRACTICUM IN SOCIAL WORK (3-4) (Social Work)

Application of theory in agency settings. Personal conferences which point direction and evaluation by agency staff and faculty. Prerequisite: 341 is required with 342 and 355 suggested. Up to twelve hours may be taken in the practicum, but no more than four hours in any one quarter. Must be arranged with instructor.

415 SOCIAL ORGANIZATION AND DISORGANIZATION (3)

Causes and theories of equilibrium and disequilibrium.

421 SOCIOLOGY OF EDUCATION (3)

The school as a social institution, school-community relation, social control of education, and structure of school society.

423 BLACK URBAN CULTURE (3) (Anthropology)

Cultural uniqueness and education of the Black American. Will be geared to the inner city educator, students preparing for urban teaching, and departmental majors. Prerequisite: Graduate or Senior standing.

430 APPALACHIAN CULTURE (3-4) (Anthropology)

To familiarize departmental majors, educators, and education students with Appalachian culture and education of the Appalachian child. Prerequisite: Graduate or Senior standing.

434 INTERCULTURAL RELATIONS: A SEMINAR (3)

Development of cultural awareness as preparation for working abroad. Prerequisite: Six hours of any social science.

452 CRIMINOLOGY THEORY (3)

Concentration on development of theory over the past century. Main purpose is to prepare students for graduate study in criminology. Prerequisite: Soc 352.

471 TRENDS AND PROBLEMS OF RURAL LIVING (3)

Examination of the trends and problems of rural living, how they have changed, and prospects for the future at local, national, and international levels.

481, 482, 483 INDEPENDENT READING (2-4)

491, 492, 493 INDEPENDENT RESEARCH (3-6)

SPANISH (SPN)—See MODERN LANGUAGES

SPEECH AND THEATRE (SPC)

Associate Professors Eakins, Edwards (Acting Chairman); *Assistant Professor* Dreher; *Instructors* Gaw, Lane.

NOTE: All general speech and speech education majors must take SPC 135 and 136, the basic course of the department. Hyphenated courses must be taken in sequence.

101-102 INTRODUCTION TO THEATRICAL TECHNIQUES (3)

A survey of the history of theatrical arts. (101) Greek through Elizabethan theatre. (102) Restoration to the Theatre of the Absurd. Required laboratory work on departmental play productions.

111 ORAL READING OF PROSE (3)

112 ORAL READING OF POETRY (3)

121 (221) VOICE AND DICTION (2)

Introductory study of the principles of voice and articulation. Designed to raise levels of adequacy from subnormal to that considered acceptable for college graduates.

125 SPEECH DEVELOPMENT AND DISORDERS (3)

Lectures on development of speech and speech disorders, especially for elementary education majors. Not credited for certification in a speech and hearing major. Secondary speech education majors should take SPC 127

126 FUNDAMENTALS OF COMMUNICATION (3)

Principles and practice of oral communication in discussion, reading aloud, story-telling, and public speaking. Provides certification in speech for elementary education majors.

127 INTRODUCTION TO SPEECH DISORDERS (3)

Development of normal speech; disorders of speech; special problems of speech handicapped; speech therapy and the therapist. Required for those expecting to become speech and hearing therapists; recommended for secondary education majors.

128 PHONETICS (3)

Speech sounds of the English language; phonetic alphabet; introduction to dialects. Required for those expecting to major in speech and hearing therapy. Strongly recommended for all speech majors.

131 (231) DISCUSSION METHODS (3)

Theory and practice in round-table, panel, forum, and parliamentary procedure.

135-136 ESSENTIALS OF PUBLIC SPEAKING (3)

Basic course of the department required of all general speech and speech education majors; pertinent to speech and hearing majors and secondary education majors. (135) Speech Delivery: visible and audible codes in public speaking; experience in preparing and presenting speeches. (136) Speech Content: emphasis on organizing, wording, and projecting content.

ADVANCED COURSES

All advanced courses have a prerequisite of nine credit hours earned in the department, plus any other prerequisite specified.

201 ACTING FUNDAMENTALS (3)

Theory of action on the stage; basic technical requirements of voice, body, and role for the actor.

202 ADVANCED ACTING (3)

Contemporary theories of acting; projects in conception and creation of a role for the stage. Prerequisite: SPC 201.

206 SCENE DESIGN (3)

Theories of styles of settings, and a comparison of the methods of modern designers. Includes laboratory practice. Prerequisite: SPC 101 and 102.

221 (222) ADVANCED VOICE AND DICTION (3)

Development of heightened speech effectiveness for students planning work in professions requiring special speech skills (acting, radio, TV, etc.) Prerequisite: SPC 121, 128. Offered alternate years.

223 BASES OF VOICE AND ARTICULATION (3)

Anatomical, physiological, and neurological bases of speaking. Required for those expecting to major in speech and hearing therapy. Prerequisite: SPC 127, 128. Offered alternate years with SPC 127.

232 DECISION-MAKING (3)

Speaking and reasoning skills in both informal and formal controversy; argumentation and debate.

301 FUNDAMENTALS OF PLAY-DIRECTING (3)

Principles and problems of the technical demands of directing a play. Prerequisite: SPC 201.

302 ADVANCED PLAY-DIRECTING (3)

Theories and special projects in directing a play. Prerequisite: SPC 301.

The following courses require a minimum of 18 credit hours in speech and theatre, nine of which must be in advanced courses.

311 ORAL READING OF DRAMA (3)

Analysis and practice in reading from plays and dramatic poetry; reader's theatre; performance. Prerequisite: SPC 112, 201.

321 SPEECH AND LANGUAGE DEVELOPMENT (3)

The development of speech and language in the pre-school years. Prerequisite: SPC 128.

331 SPEECH COMPOSITION (3)

An advanced course in organization and psychology of effective speech-making.

332 FORMS OF PUBLIC ADDRESS (3)

Speech types and communicative needs in public speaking today; rhetorical theory; performance.

401 ONE-ACT PLAY SEMINAR (3)

Each student produces a one-act play for public presentation. Prerequisite: SPC 202, 302.

402 CLASSIC DRAMA SEMINAR (3)

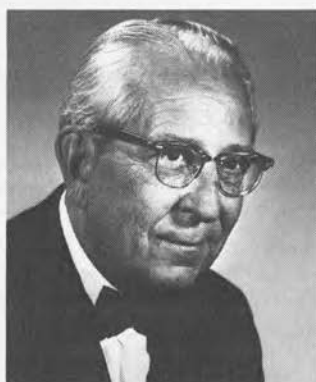
Practice in staging scenes from representative dramas in history of theatre. Prerequisite: SPC 202, 302.

481 INDEPENDENT READING (2)

Departmental honors program. By arrangement with instructor only.



Trustees Meeting



F.A. White



J.B. Thomas



W.H. Abraham



W.D. Baker



R.T. Conley



F.N. Marquis



R.P. Milheim

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- Mary Ellen Burns (1968) *Assistant to the Dean of Graduate Studies*
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B.S., Murray State, 1949; M.A., Kentucky, 1954; Ph.D., Southern Illinois, 1965.
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A.B., Miami, 1940; M.S., Nebraska, 1942; Ph.D., Illinois, 1948.
- Alan J. Herbert (1969) *Director of Communications*
B.S., Illinois, 1953.
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B.B.A., Cincinnati, 1965.
- Jules Lipton (1969) *Staff Assistant, Executive Offices*
B.A., Univ. Wisconsin, 1939; LL.B., Fordham Law School, 1949; M.B.A., Ohio State University, 1965.

BUSINESS AND FINANCE

- Frederick A. White (1962) *Business Manager and Treasurer*
A.B., Otterbein, 1928.
- Adrian E. Bowen (1965) *Assistant Treasurer*
A.B., Wittenberg, 1958.
- Julia I. Adkins (1967) *Payroll Supervisor*
B.S., Morehead State, 1948.
- David W. Allaman (1967) *Director, Personnel Services and Auxiliary Enterprises*
B.A., Otterbein, 1930.
- R. Donald Bell (1964) *Director of General Services and Purchasing*
B.B.A., Cincinnati, 1955.
- Richard A. Bowersox (1968) *General Accountant*
B.A., Cedarville College, 1968.
- Charles L. Brinkman, Jr., 1969 *General Accountant*
B.S., St. Joseph's, 1965.
- David K. Fath (1968) *Bursar*
B.S., Wright State, 1968.
- Arthur R. Munch (1968) *Manager of Printing Services*
B.S., Ohio State, 1956.
- Ronald L. Oldiges (1966) *Assistant Manager of Purchasing*
- Charles M. Orr (1966) *Director of Data Processing*
- Lionel A. Proulx (1969) *Special Assistant, Business Office.*
B.A., Wright State University, 1968.
- Arlo D. Ragan, Jr. (1969) *Controller*
B.S., Bowling Green, 1954; M.B.A., Xavier, 1962.

James C. Spirk (1966) *Director of Classified Personnel*

B.A., Dayton, 1963.

Robert E. Spriggs (1965) *Manager of Book Center*

STUDENT AFFAIRS

James B. Allan (1967) *Assistant Director of Student Aid*

B.S., Miami, 1962; M.S., 1966.

Walker M. Allen Jr. (1965) *Registrar*

A.B., Miami, 1962; M.S. Wright State, 1968.

Ruth L. Bell (1967) *Recorder, Division of Business Administration*

B.S., Cincinnati, 1954.

Robert L. Clark (1968) *Associate Professor, Education; Acting Director of Student Services; and Staff Assistant, Executive Offices*

B.S., Murray State, 1949; M.A., Kentucky, 1954; Ph.D., Southern Illinois, 1965.

Elizabeth Dixon (1968) *Director of University Center*

B.S., Illinois Institute of Technology, 1938.

Sally A. Evans, (1968) *Record Analyst, Division of Education*

B.S., Wright State, 1968.

C. DeWitt Hardy (1963) *Director of Admissions*

A.B., Northwestern, 1932; M.A., 1933; LL.D., McKendree, 1956.

Carl L. Harshman (1968) *Assistant Director of Admissions*

B.A., Ohio State, 1965.

Charles K. Hartness (1966) *Counselor*

A.B., Miami, 1962; M.S., Wright State, 1968.

William C. Kellerman (1968) *Director of Student Placement*

B.A., Illinois Wesleyan, 1941.

Elenore A. Koch (1967) *Instructor, Education, and Assistant Director of Counseling Service for Testing*

B.S., Ohio, 1951; M.S., Miami, 1961.

Bruce Lyon (1967) *Assistant Professor, Education, and Dean of Students*

B.S., Northwestern, 1962; M.A., 1964; Ph.D., Ohio State, 1969.

Donald J. Mohr (1966) *Director of Student Aid and Acting Athletic Director*

B.S., Cincinnati, 1950; M.A., Xavier, 1963.

Eunice McCune (1968) *Assistant Registrar*

Clifford T. McPeak (1966) *Instructor, Physical Education, and Director of Intramural Sports*

B.S., Ed., Miami, 1964; M.Ed., 1965.

Neil A. Paulson (1968) *Alumni Secretary*

B.S., Miami, 1968.

Laurence T. Ruggieri (1969) *Assistant Dean of Students*

B.A., Ohio State, 1965; M.A., 1968.

Catherine L. Stofer (1964) *Records Analyst, Division of Education*

B.S., Ohio State, 1930.

PHYSICAL PLANT

Robert D. Marlow (1967) *Director of Physical Plant*

P.E., BSCE, Texas A & M, 1963.

Harold Shearer (1964) *Assistant Director of Physical Plant*

FACULTY

Ellen D. Abell (1964) *Lecturer, Art Education*

B.S.F.A., Teachers College, Columbia, 1938; M.A.F.A., 1940.

Warren H. Abraham (1963) *Professor and Dean of the Division of Continuing Education*

B.S.Ed., Indiana, 1951; M.S.Ed., 1952.

Robert W. Adams (1965) *Instructor, Political Science*

A.B., Utica, 1955; M.A., Syracuse, 1961.

Imtiaz Uddin Ahmad (1969) *Associate Professor, Quantitative Business Analysis*

B.A., Univ. of Karachi, 1958; M.A., Muslim Univ., 1960; Ph.D., New York State, 1967.

James R. Anderson (1968) *Instructor, Accountancy*

B.S., Miami, 1965; M.B.A., 1967.

Ronald Andrews (1967) *Lecturer, Accountancy**

B.A., Defiance, 1963; M.B.A., Miami, 1966; C.P.A., 1967.

Norman S. Anon (1966) *Professor and Chairman, Economics*

A.B., Miami, 1948; M.S., Wisconsin, 1951; Ph.D., 1954.

Martin Arbagi (1969) *Assistant Professor, History*

A.B., Georgetown, 1961; M.A., Rutgers, 1963.

Madaline H. Apt (1966) *Assistant Professor, Education*

B.S., Pittsburgh, 1960; M.Ed., 1962; Ph.D., 1966.

Theodore N. Atsalis (1967) *Assistant Professor, Music +*

B.Mus., Miami, 1960; M.Mus., 1962.

Georgiana Babb (1964) *Associate Professor, English, German, and Linguistics*

B.A., Ohio State, 1943; M.A., 1946; Ph.D., 1951.

Peter W. Bacon (1969) *Associate Professor, Finance*

B.A., Albion, 1962; M.B.A., Indiana, 1964; D.B.A., 1967.

Raymond R. Baird, Jr. (1969), *Instructor, Psychology*

A.B., Eastern New Mexico, 1965; M.S., Washington, 1967.

William D. Baker (1968) *Professor, English, and Dean of the Division of Liberal Arts and Acting Chairman of Department of Art*

B.A., Hobart, 1946; M.A., Chicago, 1948; Ph.D., Northwestern, 1950.

Sandra Ballagh (1968) *Instructor, Education*

B.A., Iowa, 1958; M.A., 1960.

Gary C. Barlow (1964) *Associate Professor, Art Education*

B.S., Miami, 1957; M.Ed., 1958; Ed.D., Pennsylvania State, 1967.

Prem P. Batra (1965) *Associate Professor, Biology*

B.S., Punjab, 1955; M.S., 1958; Ph.D., Arizona, 1961.

- Rubin Battino (1966) *Professor*, Chemistry
B.S., City College of New York, 1953; M.A., Duke, 1954; Ph.D., 1957.
- James B. Beard (1966) *Instructor*, Chemistry
B.A., Miami, 1957; M.A., 1961.
- Carl M. Becker (1964) *Assistant Professor*, History
A.B., Otterbein, 1949; M.A., Wisconsin, 1950.
- Donald J. Beelick (1967) *Instructor*, Philosophy
B.A., Western Michigan, 1964.
- Charles L. Belna (1969) *Assistant Professor*, Mathematics
B.S., Dayton, 1965; M.S., Michigan State, 1967; Ph.D., 1969.
- Stanley C. Bernstein (1964) *Assistant Professor*, Chemistry
B.S., Queens, 1958; M.S., Michigan, 1961; Ph.D., 1963.
- Marlene K. Bireley (1969) *Associate Professor*, Education
B.S., Bowling Green, 1957; M.A., Ohio State, 1961; Ph.D., 1966.
- Charles H. Blake, Jr. (1967) *Associate Professor*, Economics
B.S., Linfield, 1949; M.S., Wisconsin, 1953; Ph.D., 1966.
- Peter S. Bracher (1964) *Associate Professor*, English
A.B., Wittenberg, 1954; M.A., Washington, 1956; Ph.D., Pennsylvania, 1966.
- Lael E. Bradshaw (1964) *Assistant Professor*, Geology
B.S., Dayton, 1955; M.A., Texas, 1957; Ph.D., 1966.
- James E. Brandeberry (1969) *Instructor*, Engineering
B.S., Toledo, 1961; M.S., 1963.
- Anna Sue Brown (1967) *Assistant Professor*, Library Administration, and *Head Cataloging Librarian*.
B.S.Ed., Central Missouri State, 1951; M.S., Kansas State Teachers, 1954.
- Herbert E. Brown (1967) *Assistant Professor*, and *Acting Chairman*, Marketing
B.S., Southern Illinois, 1961; M.S., 1962; Ph.D., Ohio State, 1969.
- Robert E. Burger (1966) *Instructor*, Biology
B.S., Bowling Green, 1965; M.S., 1967.
- Glenn E. Burruss (1968) *Associate Professor*, Economics
B.A., Cincinnati, 1957; M.A., 1958; Ph.D., 1960.
- Charles W. Carlson (1969) *Assistant Professor*, Business, at Western Ohio Branch Campus in Celina
B.A., Bard College, 1925; M.A., Columbia, 1939.
- Robert F. Carpenter (1964) *Assistant Professor*, Physics
B.S., Union, 1949; M.S., Ohio State, 1952; Ph.D., 1963.
- Roger N. Carter (1966) *Assistant Professor*, Economics
B.B.A., Miami, 1954; M.B.A., 1955.
- Cecile W. Cary (1967) *Assistant Professor*, English
B.A., Macalaster, 1959; M.A., Washington, 1963; Ph.D., 1969.
- Norman R. Cary (1967) *Assistant Professor*, English
B.A., Asbury, 1958; M.A., Arkansas, 1960; Ph.D., Wayne State Univ., 1968.
- Robert Cavally (1966) *Associate*, Music*
B.Mus., Cincinnati Conservatory; Graduate study, Paris Conservatory.

- Beatrice F. Chait (1965) *Associate Professor, Education, and Director of Laboratory Experiences in Education*†
A.B., Hunter, 1936; M.A., Michigan, 1951.
- Joseph T. Chao (1967) *Associate Professor, Economics*
B.A., Catholic University of Peiping, 1947; M.S., Southern Illinois, 1958; Ph.D., New York University, 1968.
- Eugene D. Chambers (1968) *Lecturer, Psychology**
B.S., Illinois, 1950; Ph.D., 1958.
- Julien M. Christensen (1964) *Lecturer, Psychology**
B.S., Illinois, 1940; M.A., Ohio State, 1952; Ph.D., 1959.
- Robert L. Clark (1968) *Associate Professor, Education; Staff Assistant, Executive Offices; and Acting Director of Student Services*
B.S., Murray State, 1949; M.A., Kentucky, 1954; Ph.D., Southern Illinois, 1965.
- Nicholas H. Claudy (1969) *Instructor, Classics*
B.A., Brown, 1965; M.A., North Carolina, 1969.
- Robert T. Conley (1967) *Professor, Chemistry, and Dean of the Division of Science and Engineering*
B.S., Seton Hall, 1953; M.A., Princeton, 1955; Ph.D., 1957.
- Lois A. Cook (1964) *Instructor, Chemistry*
B.A., Wooster, 1945; M.S., Ohio State, 1948.
- William E. Coppage (1964) *Associate Professor, Mathematics*
B.A., Texas Agricultural and Mechanical, 1955; M.S., 1956; Ph.D., Ohio State, 1963.
- John B. Cordrey (1967) *Assistant Professor, Economics*
B.S., Ohio State, 1961; M.S., 1962; Ph.D., North Carolina, 1968.
- Robert M. Correale (1967) *Instructor, English*
B.A., St. Bonaventure, 1955; M.A., Siena, 1960.
- Edward F. Cox (1965) *Professor, History*
A.B., Indiana, 1949; M.A., 1950; Ph.D., 1957.
- Myron K. Cox (1969) *Associate Professor, Quantitative Business Analysis*
B.S., Virginia Polytechnic, 1949; B.S., Pennsylvania State, 1952; M.Sc., Massachusetts Institute of Technology, 1957; E.E., North Carolina State College, 1963; D.Sc., College of Applied Science, London, England, 1964.
- Eugene R. Craine (1967) *Professor and Chairman, History*
B.A., Maryville, 1940; M.A., Tennessee, 1946; Ph.D., Oklahoma, 1954.
- Sue C. Cummings (1969) *Assistant Professor, Chemistry*
B.A., Northwestern, 1963; M.Sc., Ohio State, 1965; Ph.D., 1968.
- Kenneth I. Dailey (1968) *Professor, History*
A.B., St. Lawrence, 1938; Ph.D., Syracuse, 1957.
- James S. Dean, Jr. (1965) *Assistant Professor, English*
B.A., William and Mary, 1960; Ph.D., Birmingham (England), 1962.
- Kay K. Deaux (1967) *Assistant Professor, Psychology*
B.A., Northwestern, 1963; Ph.D., Texas, 1967.

- James A. Dillehay (1969) *Assistant Professor*, Education
B.S., Dayton, 1957; M.Ed., Miami, 1960; Ed., S., Bowling Green, 1968; Ph.D., 1969.
- Robert D. Dixon (1964) *Associate Professor*, Mathematics
B.S., Ohio State, 1958; M.S., 1960; Ph.D., 1962.
- James T. Dodson (1964) *Assistant Professor*, Library Administration, and *Head Librarian*
A.B., Denison, 1954; M.A., Ohio State, 1960; M.S.L.S., Western Reserve, 1962.
- Robert Dolphin, Jr. (1967) *Associate Professor and Chairman*, Finance
B.S., Indiana, 1960; M.B.A., 1961; D.B.A., Michigan State, 1964.
- Jacob H. Dorn III (1965) *Associate Professor*, History
B.A., Wheaton, 1960; M.A., Oregon, 1962; Ph.D., 1965.
- Barbara B. Dreher (1966) *Assistant Professor*, Speech and Theatre
B.A., Connecticut, 1955; M.A., Illinois, 1956; Ph.D., Ohio State, 1966.
- R. Gene Eakins (1969) *Associate Professor*, Speech and Theatre
B.A., Wittenberg, 1951; B.S., Wittenberg, 1953; M. Ed., Kent State, 1959; Ph.D., Ohio State, 1966.
- Robert D. Earl (1966) *Assistant Professor*, Education
A.B., Bluffton, 1954; M.A., Miami, 1958; Ed.D., Oklahoma State, 1967.
- Charlene F. Edwards (1965) *Associate Professor and Acting Chairman*, Speech and Theatre
B.A., Colorado, 1936; M.A., Denver, 1945; Ph.D., 1957.
- Dean S. Eiteman (1969) *Associate Professor*, Accountancy
B.B.A., University of Michigan, 1957; M.B.A., 1958; Ph.D., Michigan State University, 1967.
- John W. Ellison (1969) *Instructor*, Education
B.A., Morehead State, 1963; M.A., Xavier, 1964.
- Burton I. Eskow (1968) *Instructor*, Political Science
B.S., Pennsylvania, 1954; M.A., New School of Social Research, 1965.
- Rand B. Evans (1967) *Assistant Professor*, Psychology
B.A., Texas, 1963; M.A., 1964; Ph.D., 1967.
- Rodney E. Evans (1969) *Associate Professor*, Marketing
B.S., Michigan State, 1961; M.B.A., 1963; Ph.D., 1966.
- Thomas G. Evans (1968) *Assistant Professor*, Accountancy
B.S., Pennsylvania State, 1965; M.B.A., Michigan State, 1966; Ph.D., 1969.
- William D. Evans (1964) *Assistant Professor*, Business and Office Administration
B.S.Ed., Youngstown, 1956; M.Ed., Miami, 1964.
- Betty Jane Fabric (1968) *Instructor*, Education
B.A., University of Miami, 1962; M.A., University of Miami, 1963.
- William C. Fenton (1965) *Associate Professor and Chairman*, Music, and *Administrative Chairman*, Art
B.Mus., Cincinnati Conservatory, 1950; B.S., 1951; M.Ed., Miami, 1956; Ed.D., Cincinnati, 1967.
- Alec A. Fletcher (1969) *Assistant Professor*, Management
B.Sc., Univ. of London, 1932; D.I.C., 1933.

- Arlene F. Foley (1964) *Assistant Professor*, Biology
A.B., Anderson, 1960; M.A., Indiana, 1963.
- John J. Fortman (1965) *Associate Professor*, Chemistry
B.S., Dayton, 1961; Ph.D., Notre Dame, 1965.
- Barbara R. Foster (1966) *Assistant Professor*, Music
B.F.A., Georgia, 1958; M.F.A., 1960; M.Mus., Illinois, 1963.
- Lloyd W. Fruch, II (1965) *Lecturer*, Economics*
A.B., Miami, 1958; M.A., 1961.
- Eric Lewis Friedland (1968) *Assistant Professor*, Religion (Sanders Scholar)
B.A., Boston University, 1960; M.A., Brandeis, 1962; Ph.D., 1967.
- H. Ira Fritz (1966) *Associate Professor*, Biology
B.A., California, 1958; Ph.D., 1964.
- L. Ronald Frommeyer (1967) *Assistant Professor*, Library Administration and
Co-ordinator of General Services
B.A., Athenaeum of Ohio, 1957; M.S.L.S., Western Reserve, 1965.
- John E. Gadell (1968) *Instructor*, Education
A.B., Washington University, 1957; M.A., 1965;
- Joseph Allen Gattton (1969) *Assistant Professor*, Education, and *Director of Piqua
Academic Center*
B.S., Miami, 1957; M.Ed., 1960.
- Beverly A. Gaw (1969) *Instructor*, Speech and Theatre
B.A., Miami, 1964; Miami, 1967.
- Paul Geineman (1968) *Instructor*, French
B.A., Ohio State, 1967; M.A., 1968.
- Hildegard M. Gensch (1969) *Assistant Professor*, German
B.A., Bob Jones Univ., 1956; M.A. (Music) 1958; M.A., Middlebury College,
1963; Ph.D., Cincinnati, 1967.
- James J. Gleason (1966) *Assistant Professor*, English
B.S., Dayton, 1953; M.A., Ohio State, 1957; Ph.D., 1969.
- Brage Golding (1966) *Professor*, Engineering, and *President*
B.S.Ch.E., Purdue, 1941; Ph.D., 1948.
- Elisbeth A. Goldstein (1969) *Instructor*, Library Science, and *Assistant Reference
Librarian*
B.A., Denison, 1966; M.L.S., Pittsburgh, 1969.
- Krishan K. Gorowara (1966) *Associate Professor*, Mathematics
B.A., Lucknow, 1951; M.A., 1952; Ph.D., Delhi, 1958.
- Glenn T. Graham (1966) *Assistant Professor*, Education, and *Acting Director of
Graduate Studies in Education*
B.S., Pittsburgh, 1962; M.A., 1965; Ed.D., 1966.
- Cynthia W. Grauman (1969) *Instructor*, English
B.S., Northwestern, 1955; M.A., Chicago, 1961.
- Rust F. Gray, Jr. (1969) *Assistant Professor*, Finance, and *Assistant Dean of the
Division of Business Administration*
B.A., DePauw, 1960; M.B.A., Miami, 1963; Ph.D., Illinois, 1969.

- Walter R. Greenfield (1969) *Instructor*, Accountancy
B.S., Miami, 1966; M.B.A., 1968.
- Al F. Guinn (1969), *Associate Professor*, Music
B.S., Cincinnati, 1952; M.Ed., Miami, 1956.
- Robert M. Haber (1965) *Associate Professor*, Mathematics
B.S., Ohio State, 1953; M.S., 1955; Ph.D., 1958.
- Carol J. Hagen (1969) *Instructor*, English, at Western Ohio Branch Campus in
Celina
B.A., Ohio Northern, 1966.
- George T. Hankins (1969) *Assistant Professor*, Engineering
B.S.E.E., Air Force Institute Technology, 1955; M.S.E.E.,
Southern Methodist University, 1961.
- Harvey M. Hanson (1965) *Professor and Chairman*, Physics
B.S., Akron, 1952; M.S., Ohio State, 1954; Ph.D., 1956.
- Mary Harbage (1967) *Professor*, Education
B.A., Ohio State, 1931; M.A., 1949; Ed.D., Teachers College, Columbia, 1963.
- Elizabeth Harden (1966) *Associate Professor*, English
B.A., Western Kentucky State, 1956; M.A., Arkansas, 1958; Ph.D., 1965.
- William E. Harrison (1967) *Lecturer*, Business*
B.A., Morehouse College, 1932; M.B.A., Ohio State, 1938.
- Joseph W. Hemsky (1966) *Assistant Professor*, Physics
B.S., Missouri School of Mines and Metallurgy, 1958; Ph.D., Purdue, 1966.
- George G. Hess (1965) *Assistant Professor*, Chemistry
B.S., Juniata, 1959; Ph.D., Pennsylvania State, 1964.
- George T. Hildahl (1969) *Instructor*, Chemistry, at Western Ohio Branch Campus
in Celina
B.S., Wisconsin, 1950; M.S., 1956.
- Robert Hockenberger (1966) *Associate*, Music*
B.M., B.Sc., College-Conservatory of Music, Cincinnati, 1966; Principal
trumpeter: Dayton Philharmonic.
- Lilburn P. Hoehn (1969) *Associate Professor*, Education
B.S.Ed., Missouri, 1954; M.Ed., 1963; Ph.D., Michigan State, 1967.
- Alan D. Hogan (1966) *Assistant Professor*, Library Administration, and *Systems
Automation Librarian*
A.B., John Carroll, 1961; M.S.L.S., Western Reserve, 1963.
- Lela M. Holmes (1969) *Instructor*, Library Administration, and *Librarian* at
Western Ohio Branch Campus in Celina
B.A., St. Francis, 1966; M.A., Indiana, 1967.
- Shigeru I. Honda (1966) *Associate Professor*, Biology
B.S., California Institute of Technology, 1950; M.S., Wisconsin, 1952; Ph.D.,
1954.
- Ronald Frederick Hough (1966) *Instructor*, Philosophy
B.S., Dayton, 1961; M.A., Miami, 1962.

- Jerry H. Hubschman (1964) *Associate Professor*, Biology
A.A.S., State University of New York, 1956; B.S., Ohio State, 1959; Ph.D., 1962.
- Wesley C. Huckins (1968) *Associate Professor*, Education
B.S., Black Hills State Teachers, 1953; M.A., Wyoming, 1955; Ed.D., 1963.
- James M. Hughes (1964) *Instructor*, English
A.B., Harvard, 1961; M.A., Pennsylvania, 1962.
- L. Robert Hughes (1964) *Instructor*, History
A.B., Bradley, 1950; M.A., Colorado, 1962.
- Lawrence E. Hussman (1965) *Associate Professor*, English
B.A., Dayton, 1954; M.A., Michigan, 1957; Ed.D., 1964.
- Brian L. Hutchings (1968) *Professor and Chairman*, Biology
B.S., Brigham Young, 1938; M.S., Wisconsin, 1940; Ph.D., 1942.
- Roger W. Hutt (1969) *Instructor*, Marketing
B.S., Ohio State, 1966; M.B.A., 1968.
- Willard J. Hutzell (1966) *Assistant Professor*, Political Science
A.B., Bowling Green, 1959; Ph.D., Maryland, 1966.
- Roger G. Iddings (1964) *Associate Professor*, Education, and *Director of Undergraduate Studies in Education*
A.B., Hanover, 1952; M.Ed., Wayne State, 1960; Ph.D., Ohio State, 1966.
- A.K.M. Aminul Islam (1969) *Assistant Professor*, Sociology & Anthropology
B.A., Dacca, 1952; M.A., 1954; M.A., London, 1961; M.A., Toronto, 1964; Ph.D., McGill, 1969.
- Donald J. Jacobson (1967) *Instructor*, Library Administration, and *Reference Librarian*
B.A., Western Reserve University, 1965; M.S.L.S., 1967.
- Francis J. Jankowski (1969) *Professor and Chairman*, Engineering
B.S.C.E., Union College, 1943; M.S., University of Cincinnati, 1947; Sc.D., 1949.
- Michael V. Jenkins (1969) *Instructor*, Mathematics, at Western Ohio Branch Campus in Celina
B.S., Rio Grande, 1968; M.Ed., Morehead, 1968.
- D. Donald Jones (1968) *Lecturer, Accountancy**
B.S., Ohio State, 1956; M.B.A., 1957; C.P.A., 1961.
- Paul Ray Jones (1966) *Associate*, Music*
B.M.E., B.M., Otterbein, 1937; M.Mus., Michigan, 1940; Graduate study, Florence (Italy); Organist: First Lutheran Church; Chorusmaster: Dayton Opera.
- James J. Kane (1964) *Associate Professor*, Chemistry
B.S., Upsala, 1954; Ph.D., Ohio State, 1960.
- David J. Karl (1966) *Associate Professor and Chairman*, Chemistry
B.S., Providence, 1956; Ph.D., Michigan State, 1960.
- Paul Katz (1965) *Lecturer*, Music
B.Mus., Cleveland Institute of Music, 1931; D.Mus., Dayton, 1961; D.Mus., Central State, 1961.

- Edward H. Kemp (1968) *Professor and Chairman*, Psychology
B.A., Wake Forest, 1928; Ph.D., Clark, 1934.
- Hee-Jin Kim (1967) *Assistant Professor*, Religion
B.A., California (Berkeley), 1957; M.A., 1958; Ph.D., Claremont, 1966.
- Cynthia K. King (1965) *Assistant Professor*, Classics
B.A., Goucher, 1960; Ph.D., North Carolina, 1969.
- Ruth H. King (1968) *Instructor*, Education
B.S., Wayne State, 1958; M.A., New York, 1967.
- William J. King (1964) *Instructor*, Classics, and *Academic Chairman*
A.B., North Carolina, 1960.
- Kimmerly H. Kiser (1969) *Instructor*, Art
B.F.A., Philadelphia College of Art, 1966.
- Sherwin J. Klein (1965) *Professor*, Psychology
A.B., Western Reserve, 1940; M.A., Pennsylvania, 1947; Ph.D., 1951.
- Emil Kmetec (1964) *Professor*, Biology
Ph.B., Chicago, 1948; M.S., 1953; Ph.D., Wisconsin, 1957.
- Knight, Kenneth L. (1969) *Instructor*, Physical Education
B.S., Miami, 1964; M.Ed., 1966.
- Elenore A. Koch (1967) *Instructor*, Education, and *Assistant Director of Counseling Service for Testing*
B.S., Ohio, 1951; M.S., Miami, 1961.
- Ernest F. Koerlin (1968) *Assistant Professor*, Art
B.F.A., Minneapolis School of Art, 1961; M.F.A., Yale, 1965.
- Joseph Kohler (1965) *Associate Professor*, Mathematics
B.S., Ohio State, 1957; Ph.D., California Institute of Technology, 1962.
- Kenneth F. Kramer (1967) *Assistant Professor*, Geology
B.A., Rice, 1961; Ph.D., Florida State, 1967.
- Brian M. Kruger (1969) *Instructor*, Psychology
B.A., Wartburg, 1965; M.A., Iowa, 1967.
- Timothy J. Kubiak (1967) *Instructor*, Geography
A.B., Toledo, 1965; M.A., Michigan State, 1967.
- Andrew J. Kuntzman (1965) *Instructor*, Biology
B.S., Ohio State, 1961; M.S., 1963.
- Andrew Wen-Yuh Lai (1967) *Assistant Professor*, Quantitative Business Analysis
B.A., Chung Hsing University, 1961; M.A., Alabama, 1964.
- Paul E. Lane (1965) *Instructor*, Speech and Theatre
B.S., Ball State, 1954; M.A., 1958.
- Horace W. Lanford, Jr. (1966) *Associate Professor and Chairman*, Management
B.B.A., Georgia, 1948; M.A., George Washington, 1950; Ph.D., Ohio State, 1964.
- James E. Larkins (1964) *Assistant Professor*, Spanish, and *Assistant Dean of the Division of Continuing Education*
B.A., Miami, 1955; M.A., Ohio State, 1961; Ph.D., 1966.
- Robert J. Larson (1968) *Instructor*, Geology
B.S., Wisconsin, 1965; M.S., Michigan Technological, 1968.

- Jeffrey P. Laycock (1969) *Assistant Professor*, Business Law
A.B., Ohio State, 1965; J.D., Western Reserve, 1968.
- Frank J. Leavitt (1969) *Instructor*, Philosophy
B.S., John Carroll, 1964; M.A., University of Toronto, 1967.
- Raymond E. Lewkowicz (1966) *Associate Professor*, Mathematics
B.A., Michigan, 1952; M.A., 1956; Ph.D., 1962.
- Ilaine B. Lieberman (1966) *Assistant Professor*, Sociology
B.A., Misericordia, 1948; M.S.W., Pennsylvania, 1958.
- Helen T. Listerman (1966) *Instructor*, English
B.A., Eastern Kentucky State, 1964; M.A., Ohio, 1965.
- Thomas W. Listerman (1967) *Assistant Professor*, Physics
B.S., Xavier, 1959; M.S., Ohio, 1962; Ph.D., 1965.
- Robert E. Lloyd (1969) *Instructor*, Geography
B.A., California State College, California, Pennsylvania, 1967; M.A., Ohio State, 1969.
- Leone L. Low (1964) *Associate Professor*, Mathematics
B.S., Oklahoma State, 1956; M.S., 1958; Ph.D., 1961.
- Marc E. Low (1964) *Assistant Professor*, Mathematics
B.S., Oklahoma State, 1958; M.S., 1960; Ph.D., Illinois, 1965.
- Clara E. Lowe (1968) *Instructor*, Sociology
A.B., Geneva, 1944; M.A., Michigan State, 1950.
- Bruce Lyon (1967) *Assistant Professor*, Education, and *Dean of Students*
B.S., Northwestern, 1962; M.A., 1964; Ph.D., Ohio State, 1969.
- Janet MacKenzie, *Instructor*, English
B.A., Carleton College, 1963; M.A., Western Michigan, 1965.
- James R. Macklin (1968) *Assistant Professor*, Library Science, and *Co-ordinator of Resource Services*
A.A., Jacksonville, 1958; B.A., 1960; M.S.L.S., Western Reserve, 1962.
- Paul C. Magill (1964) *Assistant Professor*, Music
B.S., Ohio State, 1956; M.Ed., Miami, 1962.
- Philip G. Malone (1970) *Assistant Professor*, Geology
B.A., Louisville, 1962; A.M., Indiana, 1964; Ph.D., Case Western Reserve, 1969.
- Carl C. Maneri (1965) *Associate Professor and Chairman*, Mathematics
B.S., Case Institute of Technology, 1954; Ph.D., Ohio State, 1959.
- Richard A. Mann (1965) *Assistant Professor*, Engineering
B.S.M.E., Wisconsin, 1944; M.Sc., Northwestern, 1948; Ph.D., Wisconsin, 1966.
- F. Norwood Marquis (1964) *Professor*, Education, and *Dean of the Division of Education*
B.S., Central Missouri State, 1937; M.Ed., Missouri, 1945; Ed.D., 1952.
- John S. Martin (1969) *Professor*, Physics
B.Sc., Natal, 1950; M.Sc., Natal, 1952; D. Phil., Oxford (England), 1957.

- Flora-Louise Matter (1969) *Instructor*, Biology, at Piqua Academic Center and Western Ohio Branch Campus in Celina
B.S., Heidelberg, 1959; M.S., Ohio State, 1966.
- Robert W. Meadows (1969) *Instructor*, Education
B.S., Ball State, 1959; M.A., 1967.
- Gerald Meike (1965) *Instructor*, Mathematics
B.S., Aquinas, 1952; M.A., Detroit, 1954.
- Paul G. Merriam (1966) *Instructor*, History
A.B., San Diego State, 1961; M.A., Oregon, 1963.
- Raymond R. Miesnieks (1965) *Instructor*, German and Russian
B.A., Concordia, 1951; M.A., Minnesota, 1953.
- Robert P. Milheim (1964) *Professor*, Education, and *Acting Dean of the Division of Graduate Studies*
B.S., Slippery Rock State, 1939; M.A., Northwestern, 1948; Ed.D., 1955.
- Paul B. Miller (1969) *Assistant Professor*, Economics
B.S., Southern Illinois, 1959; Ph.D., Ohio State, 1968.
- Mohammad Mofeez (1967) *Assistant Professor*, Engineering
B.S., Abadan, 1955; M.S., Oklahoma, 1966; Ph.D., 1967.
- David C. Morris (1967) *Instructor*, Sociology
B.A., Ohio State, 1963; M.A., 1966.
- William A. Muraco (1968) *Instructor*, Geography
B.S., Ohio State, 1964; M.A., 1966.
- Ellen M. Murray (1967) *Instructor*, Sociology
B.A., Berea, 1952; M.A., Ohio State, 1967.
- John V. Murray (1967) *Associate Professor*, Management
B.G.E., Omaha, 1954; M.S., Colorado, 1957; D.B.A., 1967.
- Raymond L. Must (1967) *Assistant Professor*, Art
B.A., Michigan State, 1950; M.A., Ohio State, 1951.
- Charles R. McFarland (1967) *Assistant Professor*, Biology
B.S., Otterbein, 1949; M.S., Ohio State, 1950; Ph.D., West Virginia, 1967.
- Clifford T. McPeak (1966) *Instructor*, Physical Education
B.S.Ed., Miami, 1964; M.Ed., 1965.
- Russell F. McQuate (1969) *Lecturer*, Accountancy*
B.S., Ashland College; C.P.A., 1968.
- Paul McStallworth (1968) *Professor*, History
B.A., Geneva, 1936; M.A., Howard, 1940; Ph.D., Ohio State, 1954.
- James A. Noel (1966) *Professor and Chairman*, Geology
B.A., Lehigh, 1949; M.A., Dartmouth, 1951; Ph.D., Indiana, 1956.
- Noel S. Nussbaum (1965) *Associate Professor*, Biology
B.A., Brooklyn, 1956; M.A., Williams, 1958; Ph.D., Yale, 1964.
- Emma Louise Odum (1966) *Associate*, Music*
B.S., Dayton, 1942; M.Ed., Miami, 1961; Graduate study, International Summer Academy at the Mozarteum, Salzburg, Austria, 1964; Principal violist: Dayton Philharmonic and Springfield Symphony.

- Patricia Olds (1964) *Instructor*, Music
B.Mus., College of Music, Cincinnati, 1950; M.Mus., 1951; M.A., Indiana, 1962.
- Donald F. Pabst (1967) *Professor and Chairman*, Accountancy
B.B.A., Cincinnati, 1957; M.B.A., Ohio State, 1958; Ph.D., 1961; C.P.A., 1960.
- Gary B. Pacernick (1969) *Assistant Professor*, English
B.A., Michigan, 1963; M.A., Minnesota, 1966; Ph.D., Arizona State, 1969.
- Won Joon Park (1969) *Instructor*, Mathematics
B.S., Seoul National Univ., 1957; M.A., California, 1966.
- Michael A. Patchen (1968) *Instructor*, Art
B.F.A., Philadelphia College of Art, 1965; M.F.A., Indiana, 1967.
- Dominique-Marie Pascal Penot (1968) *Associate Professor*, French, and *Chairman*, Modern Languages
Baccalaureat, Aix University in France, 1944; Licence-és-Lettres, Montpellier University, France, 1953; Ph.D., Yale, 1964.
- Nicholas Piediscalzi (1965) *Associate Professor and Chairman*, Religion, and *Administrative Chairman*, Philosophy and Classics
B.A., Grinnell, 1952; B.D., Yale, 1956; Ph.D., Boston, 1965.
- David G. Poff (1969) *Assistant Professor*, Music
B.S., Lebanon Valley College, 1961; M.M., Michigan, 1962.
- John C. Pool (1969) *Associate Professor*, Economics
A.B., Missouri, 1962; M.B.A., 1964; Ph.D., Colorado, 1969.
- Robert J. Power (1965) *Assistant Professor and Academic Chairman*, Philosophy, and *Assistant Dean of the Division of Liberal Arts*
B.A., North Dakota, 1959; M.A., Emory, 1960; Ph.D., 1964.
- Paul D. Pushkar (1968) *Assistant Professor*, Geology
B.S., Manitoba, 1959; M.S., 1960; Ph.D., California, 1966.
- John R. Ray, Jr. (1964) *Assistant Professor and Acting Chairman*, Geography
A.B., Indiana, 1954; M.A., 1955.
- Robert D. Reece (1969) *Assistant Professor*, Religion
B.A., Baylor, 1961; B.D., Southern Baptist Theological Seminary, 1964; M.A., Yale, 1966; Ph.M., Yale, 1968; Ph.D., 1969.
- John Reger (1966) *Associate*, Music*
Principal trombonist: Dayton Philharmonic.
- Benjamin H. Richard (1966) *Associate Professor*, Geology
B.S., Virginia Polytechnic, 1958; M.A., Indiana, 1961; Ph.D., 1966.
- Don E. Richards (1968) *Instructor*, Education, and *Assistant Dean of the Division of Education*
A.B., Miami, 1948; M.Ed., Washington, 1952.
- Ronald E. Rife (1969) *Instructor*, Mathematics, at Western Ohio Branch Campus in Celina
B.S., Manchester, 1967; M.S., Michigan State, 1969.
- Harper A. Roehm (1966) *Assistant Professor*, Accountancy†
B.A., DePauw, 1957; M.B.A., Indiana, 1963; C.P.A., 1964.

- Klaras B. Rose (1967) *Assistant Professor*, History
B.A., Texas, 1950; M.A., 1958; Ph.D., 1963.
- John D. Rossmiller (1965) *Assistant Professor*, Biology
B.S., Wisconsin, 1956; M.S., 1962; Ph.D., 1965.
- David Sachs (1966) *Associate Professor*, Mathematics
B.S., Illinois Institute of Technology, 1955; M.S., 1957; Ph.D., 1960.
- Donald J. Schaefer (1964) *Associate Professor*, Mathematics, and *Director*, Research and Instruction Computation Center
A.B., San Jose State, 1957; M.A., Ohio State, 1958; Ph.D., 1963.
- Clyde C. Schrickel (1966) *Associate Professor*, Management
A.B., Hanover, 1949; M.B.A., Xavier, 1959; Ph.D., Ohio State, 1966.
- Richard R. Scott (1969) *Assistant Professor*, Engineering
B.S.M.E., Mississippi, 1960; Ph.D., Alabama, 1968.
- Virginia Scribner (1969) *Instructor*, Art Education
B.S., Miami, 1966; M.A., 1969.
- Suzanne Scutt (1967) *Associate*, Music*
B.Mus., Cincinnati Conservatory, 1951; M.Mus., Illinois, 1953.
- Marvin B. Seiger (1965) *Associate Professor*, Biology
B.S., Duquesne, 1950; M.A., Texas, 1953; M.A., California (Los Angeles), 1959; Ph.D., Toronto, 1962.
- Munson P. Servé (1965) *Associate Professor*, Chemistry
B.S., Notre Dame, 1961; Ph.D., 1964.
- Jo Ann Sherwin (1969) *Assistant Professor*, Geology
A.B., Brown, 1960; M.Sc., 1966.
- Mehdi Shirazi (1966) *Lecturer*, Mathematics*
B.E., Bombay, 1946; B.E., 1947; M.A., Kansas, 1956.
- Harold Silverman (1966) *Professor*, Education
B.A., Queens, 1941; B.S., Washington, 1951; M.A., 1950; Ed.D., 1952.
- Robert Silverman (1965) *Associate Professor*, Mathematics
B.S., Ohio State, 1951; M.A., 1954; Ph.D., 1958.
- Gordon B. Skinner (1964) *Professor*, Chemistry
B.S., Manitoba, 1947; M.Sc., 1949; Ph.D., Ohio State, 1951.
- Alphonso L. Smith (1964) *Instructor*, Mathematics
B.S., Ohio State, 1959; M.S., 1964.
- Howard P. Smith (1969) *Assistant Professor*, Education, at Western Ohio Branch Campus in Celina
B.A., Mount Union, 1927; M.A., Ohio State, 1933; Ph.D., Pittsburgh, 1943.
- Reed M. Smith (1969) *Professor and Chairman*, Political Science
A.B., Oberlin, 1949; M.A., Penn State, 1954; Ph.D., Columbia, 1961.
- Ronald G. Smith (1967) *Assistant Professor*, Psychology
B.A., Houston, 1961; M.A., 1963; Ph.D., 1966.
- Allan Spetter (1967) *Assistant Professor*, History
B.A., Rutgers, 1960; M.A., 1961; Ph.D., 1967.
- Paul Spiegel (1966) *Associate*, Music*
B.S.M.E., Ohio State, 1956; Oboist: Dayton Philharmonic.

- Roger J. Stauffer (1969) *Assistant Professor, Business, and Resident Director of Western Ohio Branch Campus in Celina*
B.S., Ball State, 1937; M.A., Columbia, 1942.
- James J. Steineman (1968) *Instructor, German*
B.A., Dayton, 1966; M.A., Washington, 1968.
- Earl M. Stephanson (1969) *Associate Professor, Economics*
B.A., Montana, 1949; M.A., 1950.
- James E. Stewart (1968) *Assistant Professor, Accountancy*
B.S., Cincinnati, 1965; M.B.A., Xavier, 1967; C.P.A., 1966.
- Kenton E. Strickland (1969) *Instructor, Geology, at Piqua Academic Center and Western Ohio Branch Campus in Celina*
B.S., Bowling Green, 1967.
- Frederick Stuyvesant (1966) *Instructor, French*
A.B., Thiel, 1964; M.A., Ohio State, 1965.
- Richard Sultzbach (1964) *Lecturer, Speech**
B.A., Wittenberg, 1938; M.A., Michigan, 1960.
- Nina D. Suru (1969) *Instructor, English*
B.A., Southwestern Louisiana, 1966; M.A., Louisiana State, 1968.
- F. Richard Swann (1966) *Instructor, History*
B.A., Notre Dame, 1952; M.A., Xavier, 1962.
- George M. Swisher (1969) *Instructor, Engineering*
B.S.M.E., Cincinnati, 1966; M.Sc., Ohio State, 1967.
- John P. Thatcher (1969) *Instructor, Sociology & Anthropology*
B.A., Middlebury, 1964; M.A., Pennsylvania, 1968.
- Robert G. Thobaben (1964) *Assistant Professor, Political Science*
B.Sc., Ohio, 1948; M.A., Miami, 1962; Ph.D., Cincinnati, 1967.
- Jack Bruce Thomas (1969) *Professor, Sociology, and Provost*
B.S., Indiana, 1940; M.S., New York, 1941; Ph.D., Indiana, 1959.
- Jerry Throckmorton (1965) *Assistant Professor, Accountancy*
B.S., Miami, 1957; M.B.A. 1965; C.P.A., 1968.
- Robert Thygersen (1966) *Associate, Music**
B.M., Dayton, 1949; M.Ed., Miami, 1955; Supervisor of Music:
Kettering Public Schools.
- Ann E. Tibbits (1968) *Instructor, English*
B.A., Springhill, 1966; M.A., Louisiana State, 1967.
- Rita Sloan Tilton (1967) *Assistant Professor, Education and Business*
B.A., Tulsa, 1954; M.A., Teachers College, Columbia, 1962; Ph.D., Minnesota, 1967.
- Donald Topmiller (1965) *Lecturer, Psychology**
B.A., Miami, 1952; M.A., Lehigh, 1954; Ph.D., Ohio State, 1964.
- Lucy Torres (1969) *Instructor, Spanish*
B.A., Puerto Rico, 1959; M.A., Indiana, 1962.
- James R. Trail, (1967) *Instructor, Geography*
B.Sc., Western Illinois, 1963; M.A., Ohio State, 1966.

- John J. Treacy (1967) *Associate Professor*, Economics
B.S., South Carolina, 1957; Ph.D., Tulane, 1963.
- James K. Uphoff (1967) *Assistant Professor*, Education
B.A., Hastings, 1959; M.Ed., Nebraska, 1962; Ed.D., 1967.
- Jane Varella (1966) *Associate*, Music*
B.M., Eastman, 1958; Percussionist: Dayton Philharmonic.
- Harvey M. Wachtell (1966) *Instructor*, History
B.A., Brooklyn, 1961.
- Eugene W. Wade (1964) *Associate Professor*, Education
A.B., Miami, 1953; M.Ed. 1958; Ed.D., Indiana, 1960.
- Robert J. Wade, Jr. (1968) *Associate Professor*, Business Law, and *Acting Chairman*, Dept. of Business
B.S., Indiana, 1960; J.D., Michigan, 1963; Indiana Bar, 1965;
LL.M., Southern Methodist U., 1968.
- Herman A. Waggener, Jr. (1969) *Instructor*, Management
B.A., Mississippi, 1941; M.B.A., Wright State, 1969.
- Robert A. Wagley (1969) *Instructor*, Business
B.S., Ball State, 1962; M.B.A., 1963.
- Richard R. Ward (1968) *Assistant Professor*, Library Administration and *Coordinator of Media Services*
B.S., Indiana State, 1961; M.S., 1964.
- Melvin Warrick (1965) *Lecturer*, Psychology*
B.S., Illinois, 1938; M.S., 1939; Ph.D., Ohio State, 1961
- Byron Weng (1965) *Instructor*, Political Science
B.A., National Taiwan, 1957; M.S., Wisconsin, 1961.
- Thomas H. Wetmore (1969) *Professor and Chairman*, English
A.B., Lincoln Memorial University, 1934; M.A., Duke, 1940;
Ph.D., University of Michigan, 1956.
- Eldon J. Wetter (1969) *Instructor*, Geography, at Piqua Academic Center and Western Ohio Branch Campus in Celina
B.S., Platteville State, 1967.
- Anni Whissen (1965) *Instructor*, German
B.A., Miami, 1957; M.A., Colorado, 1961.
- Thomas R. Whissen (1965) *Assistant Professor*, English
B.A., Kent State, 1955; M.A., Colorado, 1963; Ph.D., Cincinnati, 1969.
- John Wildman (1966) *Associate*, Music*
B.S., Conservatory of Music, Cincinnati, 1948; M.Ed., Miami, 1955; Graduate study, College-Conservatory, Cincinnati; Principal oboist: Dayton Philharmonic and Dayton Civic Band.
- Gordon L. Wise (1966) *Assistant Professor*, Marketing
B.S., Miami, 1956; M.B.A., 1957.
- Ferne P. Wolf (1967) *Associate*, Music*
B.Mus.Ed., Southern California, 1940. Organist, St. George's Episcopal Church, Dayton.

- Paul J. Wolfe (1966) *Assistant Professor, Physics*
B.S., Case Institute of Technology, 1960; M.S., 1963; Ph.D., 1966.
- David R. Wood (1967) *Assistant Professor, Physics*
A.B., Friends, 1956; M.S., Michigan, 1958; Ph.D., Purdue, 1967.
- Merritt M. Wood, Jr. (1969) *Instructor, History*, at Western Ohio Branch Campus in Celina
B.A., Arkansas, 1966; M.A., 1967.
- William F. Wood (1968) *Assistant Professor, Music*
A.B., Sacramento State, 1957; M. Mus., Oregon, 1958;
D.M.A., Eastman, 1965.
- Malcolm L. Worrell, Jr. (1967) *Lecturer, Accountancy**
B.S., Centenary, 1957; M.B.A., Michigan State, 1966; C.P.A. 1967.
- Karen Young (1966) *Associate, Music**
B.M., Montana, 1959.
- Robert Young (1966) *Instructor, Music*
B.M.E., Northwestern, 1959; M.Mus., 1965.
- Earl T. Zwetschke (1967) *Professor, Education*
B.S.Ed., Washington University, 1946; M.P.S., Colorado, 1947; Ph.D., Minnesota, 1953.

* Part-Time Faculty

† On Leave, 1969-70

** On Leave, Fall Quarter



UNIVERSITY CALENDAR 1969-70

FIRST QUARTER—FALL

September 17 (Wednesday)	Last day for pre-registered students to pay fees. Fees must be in the Bursar's Office at 5:00 p.m. on this date. After this date, all fees are payable on the same day of registration.
September 25-26-27	Registration
September 29 (Monday)	*Classes begin.
October 4 (Saturday)	Last day for 90% refund (11:00 a.m.)
October 11 (Saturday)	Last day for 80% refund (11:00 a.m.)
October 18 (Saturday)	Last day for 60% refund (11:00 a.m.)
October 25 (Saturday)	Last day for 40% refund (11:00 a.m.)
November 5 (Wednesday)	Last day students may drop courses without grades.
November 26 (Wednesday)	Classes end for Thanksgiving Vacation at 6:30 p.m.
November 27-30 (Thursday-Sunday)	Thanksgiving Vacation.
December 10 (Wednesday)	Classes end at 10:00 p.m.
December 11 (Thursday)	*Final examinations begin.
December 16 (Tuesday)	Final examinations end.

*Classes which meet on Wednesday evenings may, at the discretion of the instructor, meet one additional time.

SECOND QUARTER—WINTER

December 23 (Tuesday)	Last day for pre-registered students to pay fees. Fees must be in the Bursar's Office at 5:00 p.m. on this date. After this date, all fees are payable on the same day of registration.
January 5-6 (Monday and Tuesday)	Registration.
January 7 (Wednesday)	*Classes begin.
January 17 (Saturday)	Last day for 90% refund (11:00 a.m.)
January 24 (Saturday)	Last day for 80% refund (11:00 a.m.)
January 31 (Saturday)	Last day for 60% refund (11:00 a.m.)
February 7 (Saturday)	Last day for 40% refund (11:00 a.m.)
February 13 (Friday)	Last day students may drop courses without grades.
March 17 (Tuesday)	Classes end at 10:00 p.m.
March 18 (Wednesday)	*Final examinations begin.
March 21 (Saturday)	Final examinations end.

*Classes which meet on Monday or Tuesday evenings may, at the discretion of the instructor, meet one additional time.

THIRD QUARTER—SPRING

March 20 (Friday)	Last day for pre-registered students to pay fees. Fees must be in the Bursar's Office at 5:00 p.m. on this date. After this date, all fees are payable on the same day of registration.
March 30-31 (Monday and Tuesday)	Registration
April 1 (Wednesday)	*Classes begin.
April 11 (Saturday)	Last day for 90% refund (11:00 a.m.)
April 18 (Saturday)	Last day for 80% refund (11:00 a.m.)
April 25 (Saturday)	Last day for 60% refund (11:00 a.m.)
May 2 (Saturday)	Last day for 40% refund (11:00 a.m.)
May 8 (Friday)	Last day students may drop courses without grades.
June 9 (Tuesday)	Classes end at 10:00 p.m.
June 10 (Wednesday)	*Final examinations begin.
June 13 (Saturday)	Final examinations end.
June 14 (Sunday)	Commencement.

*Classes which meet on Monday or Tuesday evenings may, at the discretion of the instructor, meet one additional time.

FOURTH QUARTER—SUMMER (June 18 through August 29—See also Fourth Quarter Summer A and Summer B)

June 10 (Wednesday)	Last day for pre-registered students to pay fees. Fees must be in the Bursar's Office at 5:00 p.m. on this date. After this date, all fees are payable on the same day of registration.
June 17 (Wednesday)	Registration.
June 18 (Thursday)	Classes begin.
June 27 (Saturday)	Last day for 90% refund (11:00 a.m.)
July 3 (Friday)	Last day for 80% refund (5:00 p.m.)
July 4-5 (Saturday and Sunday)	Independence Day—no classes
July 11 (Saturday)	Last day for 60% refund (11:00 a.m.)
July 17 (Friday)	Last day students may drop courses without grades.
July 18 (Saturday)	Last day for 40% refund (11:00 a.m.)
August 22 (Saturday)	Classes end at 5:30 p.m.
August 24 (Monday)	Finals begin.
August 29 (Saturday)	Finals end.

FOURTH QUARTER—SUMMER A (June 18 through July 18—See also Fourth Quarter Summer and Summer B)

June 10 (Wednesday)	Last day for pre-registered students to pay fees. Fees must be in the Bursar's Office at 5:00 p.m. on this date. After this date, all fees are payable on the same day of registration.
June 18 (Thursday)	Classes begin.
June 27 (Saturday)	Last day for 90% refund (11:00 a.m.)
July 3 (Friday)	Last day students may drop courses without grades.
	Last day for 40% refund (5:00 p.m.)
July 4-5 (Saturday and Sunday)	Independence Day—no classes
July 15 (Wednesday)	Classes end at 5:30 p.m.
July 16 (Thursday)	Finals begin.
July 18 (Saturday)	Finals end.

FOURTH QUARTER—SUMMER B (July 20 through August 29—See also Fourth Quarter Summer and Summer A)

July 20 (Monday)	Classes begin.
July 25 (Saturday)	Last day for 90% refund (11:00 a.m.)
August 1 (Saturday)	Last day for 40% refund (11:00 a.m.)
August 5 (Wednesday)	Last day students may drop courses without grades.
August 22 (Saturday)	Classes end at 5:30 p.m.
August 24 (Monday)	Finals begin.
August 29 (Saturday)	Finals end.

INDEX

- Academic Calendar 19
- Academic Center 36
- Academic Information 19
- Academic Organization 8
- Accountancy 74, 131
- Accreditation 19
- Activities, Student 47
 - Clubs 48
 - Cultural 48
 - Government 47
 - Intramural 48
 - Publications 48
- Administration 217
- Admission Procedures 19
 - Certification Candidate 21
 - Graduate Student 123
 - Matriculant 20
 - Non-degree Student 21
 - Ohio Student 20
 - Out-of-State Student 20
 - Readmission 22
 - Superior High School Student 22
 - Transfer Student 20
 - Transient Student 22
 - Unclassified Student 21
- ACT Test 20
- Anthropology 56, 211
- Art 133
- Art Education 91, 135
- Audio Visual Service 11
- Audit Course 33
- Bachelor of Arts Degree 53
- Bachelor of Fine Arts Degree 56
- Bachelor of Music Degree 57
- Bachelor of Science Degree 101
- Bachelor of Science in Business Degree 71
- Bachelor of Science in Education Degree 85-86
- Bachelor of Science in Medical Technology 104
- Biology 102, 138
- Board of Trustees 217
- Business 75, 77, 141
- Business Administration, Division of 8, 71, 121
- Campus 6
- Campus Life 47
- Certificate, Instructional Fee 39
- Chemistry 106, 144
- Class Rank Definitions 26
- Classics 147
- Common Curriculum 29
- Computer Science 112
- Conduct 33
- Consortium, Dayton-Miami Valley 13, 24
- Contents, Table of 3
- Continuing Education 10, 117
- Counseling 48
- Course Repeat 27
- Courses of Instruction 131
- Credit Regulations 30
- Cross Registration with DMVC 24
- Degree Requirements 27
 - Business Administration 71
 - Education 85
 - Liberal Arts 53
 - Science and Engineering 101
- Economics 54, 75, 149
- Education 152-160
- Education, Division of 9, 85, 122
- Education, Elementary 87
- Education, Secondary 88
- Employment, Student 45
- Engineering 108, 160-162
- English 54, 162-165
- Faculty 220
- Fees 35
 - Admission 37
 - Applied Music 37
 - Change of Course 37
 - Course Audit 37
 - General Services 35
 - Graduation 37
 - Instruction and General 35
 - Late Registration 37
 - Non-resident Students 35, 36, 39
 - Piqua Academic Center 36
 - Proficiency Test 37
 - Refunds 39
 - Transcripts 37
- Finance 76, 166
- Financial Information 35
 - Aid 41-43
 - General Policies 37
 - Library Fines 37
 - Returned Check Penalty 37
- Fine Arts 166
- Food Services 49
- French 54, 189

- General Education Requirements 29
- Geography 54, 168
- Geology 109, 169-171
- German 54, 190-191
- Government 204
- Grade Explanation 26
- Graduate Studies, Division of
 - 10, 121
 - Admission Fee 37
 - Admission Procedures 123-125
 - Degrees 121
 - Financial Aid 40, 128-129
 - General Regulations 126
 - Qualifications and Standards 126
- Graduation Requirements 30
- Greek 55, 147

- Handicapped, Accommodations for 49-50
- Health Services 51
- History 55, 172-178

- Instructional Fee Certificates 39
- Instructional Materials Service 12

- Latin 55, 148
- Liberal Arts 123, 178
- Liberal Arts, Division of 9, 53
- Library Resources Center 11
- Library Science 178-179
- Linguistics 191

- Management 79-81, 179-181
- Marketing 80-82, 181-183
- Master in Business Education
 - Degree 96
- Master in Curriculum and
 - Supervision Degree 97
- Master in Elementary Classroom
 - Teacher Degree 97
- Master in Elementary School
 - Principal Degree 98
- Master in Secondary Classroom
 - Teacher Degree 97
- Master in Secondary School
 - Principal Degree 98
- Master of Arts in Education
 - Degree 95, 122
- Master of Business Administration
 - Degree 82, 121
- Master of Education Degree
 - 95, 121-122
- Master of Education in Counseling
 - and Guidance Degree 97
- Master of Science Degree 123
- Master of Science in Chemistry
 - Degree 107

- Master of Science in Education
 - Degree 122
- Master of Science in Personnel
 - Counseling Degree 97
- Mathematics 110, 183-188
- Media Services 11
- Medical Technology 103
- Miami University, Requirement
 - for Baccalaureate Degree 31
- Modern Languages 188
- Music 57-69, 194-197

- Office Administration 78, 198
- Ohio Residency, Rules Governing 40
- On-Campus Credit Regulations 30

- Petitions 33
- Philosophy 55, 199-200
- Physical Education 200
- Physics 114, 201-203
- Piqua Academic Center 118
- Placement Service 51
- Political Science 55, 204-206
- Programs, Change of 25, 37
- Psychology 114, 206-208
- Publications, Student 48

- Registration 22
- Registration Procedure 23
- Religion 55, 209-211
- Research 14
- Residence Halls 51
- Residence Rules 30
 - (On-Campus Credit Reg.)
- R O T C 25
- Russian 192

- Scholastic Regulations 32
- Science and Engineering,
 - Division of 10, 101, 123
- Secretarial Studies (Office
 - Administration) 198
- Sociology 55, 211-214
- Spanish 55, 192-193
- Speech and Theatre 55, 214-215
- Student Aid 41-43
- Student Government 47

- University Calendar 235
- University Center 8, 49
- University and Community 12
- University Environment 16
- University, History of 5
- University, Purposes of 13

- Veterans' Benefits 45

- Western Ohio Branch Campus 118
- Withdrawals 25
- Work-Study Program 45

GRADUATE SUPPLEMENT

GRADUATE PROGRAM IN SYSTEMS ENGINEERING

The Department of Engineering offers a program of advanced study leading to a Master of Science degree in systems engineering.

This program has the approval of the Ohio Board of Regents. Application procedures are in process for accreditation by the North Central Association of Colleges and Secondary Schools.

This program is open to students with baccalaureate degrees in engineering and other related fields. All candidates must have or must obtain a knowledge of fundamentals in linear systems, statics, dynamics, electronics, and control theory. The program which an individual pursues is established after consultation with an adviser in the Department of Engineering.

In addition to the standard requirements for the master's degree as outlined by the Division of Graduate Studies elsewhere in this bulletin, requirements for the Master of Science degree in systems engineering are:

- (1) A minimum of nine hours of mathematics.
- (2) A minimum of 36 hours in engineering or other related areas.
- (3) (1) and (2) shall include a minimum of 18 hours of 500 level (or above) courses.

A master's thesis is optional in the program with a maximum of nine hours of thesis credit. The student who does not write a thesis will be required to take a written comprehensive examination.

A student entering the graduate program in engineering in the fall quarter could complete the requirements in two years. One possible program is as follows:

FIRST YEAR

<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
EGR 542 Digital computer design (3)	EGR 430 Distributed systems (3)	EGR 441 Electronics II (4)
EGR 621 Random processes (3)	EGR 521 Synthesis of linear systems (3)	EGR 426 Control systems (4)
Mathematics (3)	Mathematics (3)	Mathematics (3)

SECOND YEAR

<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
EGR 625 Advanced control theory (3)	EGR 630 Nonlinear systems (3)	EGR 524 Large scale systems (3)
EGR 699 Thesis (2)	EGR 699 Thesis (2)	EGR 699 Thesis (3)

GRADUATE PROGRAM IN GEOLOGY

There are two programs of graduate study in the Department of Geology: leading to the degrees, 1. Master of Science or 2. Master of Science in Teaching, Earth Science. Candidates for admission to those programs are expected to meet the general requirements for admission to graduate study as established by the Division of Graduate Studies. There are other requirements pertinent to each degree program.

This program has the approval of the Ohio Board of Regents. Application procedures are in process for accreditation by the North Central Association of Colleges and Secondary Schools.

Requirements for Master of Science:

Candidates for the Master of Science degree are those generally who are seeking to assume a place in industry or continue in graduate study. In addition to the requirements of the Division of Graduate Studies, they must also fulfill the following requirements:

1. They must complete 9 quarter hours in advanced courses in such supporting fields as biology, chemistry, engineering, mathematics or physics.
2. Pass an oral examination by the end of the degree program.
3. Present four copies of an approved thesis.

Requirements for Master of Science in Teaching, Earth Science:

Candidates are usually those seeking increased proficiency in teaching earth science in secondary schools and junior colleges. To achieve this end, they must conform to the following requirements:

1. Complete a minimum of 45 quarter hours of graduate course work at Wright State University within five calendar years.
2. Register in the final quarter of the degree program.
3. Successfully complete an oral examination by the end of the last quarter of the degree program.
4. Present a report on a research project.
5. Contribute no more than 12 quarter hours of education courses towards the degree.

GRADUATE PROGRAM IN HISTORY, MASTER OF ARTS DEGREE

The purpose of this program is to produce a well-trained, well-balanced, and knowledgeable historian fully prepared to proceed to the task of gaining a higher degree and to take his place in and make valuable contributions to society. The program is designed to give breadth and depth to the student and to give him opportunities for research experience in the areas of United States, European, Latin American, Russian, and Diplomatic History. It is further designed to meet the specific needs of: (1) the professional researcher; (2) the professional scholar and college teacher; and (3) the teacher on the secondary and junior college levels. To achieve these goals, the student is offered a choice of one of two plans (Plan A or Plan B) leading to a Master of Arts degree.

This program has the approval of the Ohio Board of Regents. Application procedures are in process for accreditation by the North Central Association of Colleges and Secondary Schools.

GENERAL REQUIREMENTS FOR ADMISSION

1. The candidate must satisfy the requirements of the Graduate school.
2. The candidate must have a bachelor's degree with an over-all undergraduate grade point average of 2.7 but with a 3.0 or better in History. In special cases a candidate may be admitted on a probationary status if his grade point average is below 3.0. Probationary status will be granted only after approval by the Graduate Committee of the Department of History. Probationary status may be granted upon a favorable committee recommendation based upon the candidate's performance on the Graduate Record Examination, letters of recommendation and, whenever possible, a personal interview by the Graduate Committee.
3. The candidate must have a minimum of twenty-six semester hours or thirty-nine quarter hours of undergraduate history, at least fourteen semester hours or twenty-one quarter hours of which must be in advanced courses. Candidates who do not meet these requirements may, upon the recommendation of the Graduate Committee, enter the program, but they must take deficiency work, the amount and contents of which shall be determined by the Graduate Committee, in addition to the minimum number of hours necessary for the completion of the M. A. Program.

THE M. A. PROGRAM

1. The Master of Arts degree can be obtained through either of two programs. Plan A is intended primarily for those students who expect to continue graduate work or who need or desire the full range of professional experience, including intensive research and writing. It assures training in research techniques and the preparation of scholarly papers, culminating in the submission of a thesis. Students must meet all requirements of the Division of Graduate Studies, demonstrate a reading knowledge of one foreign language, and complete successfully History 699. Plan B is intended primarily for students interested in teaching on the primary or secondary levels or other pursuits not requiring mastery of research

and linguistic skills. Students under this plan must fulfill the requirements of the Division of Graduate Studies and complete successfully six additional quarter hours beyond those required under Plan A.

2. Requirements

Plan A: Forty-five credit hours*

History 699, Thesis 9 credit hours
 History Courses numbered 500 or above 18 credit hours

At least 6 credit hours must be taken in Research Seminars numbered 601-610, in which the student may, with the consent of the instructor, undertake research topics related to his thesis topic.

At least 6 credit hours must be taken in Reading Seminars in United States, Latin American, or Diplomatic history, and at least 6 credit hours must be taken in such seminars in European and Russian history.

Electives in History and Related Subjects 18 credit hours

At least 6 credit hours must be taken in history.

Language Proficiency Examination †

Oral Examination over Thesis

Plan B. Fifty-one credit hours**

History courses numbered 500 18 credit hours

At least 9 credit hours must be taken in Reading or Research Seminars in United States History, Latin American History, or American Diplomatic History; at least 9 credit hours in Reading or Research Seminars in European History, Russian History or European Diplomatic History.

Electives in History and Related Subjects 33 credit hours

At least 21 credit hours must be taken in history.

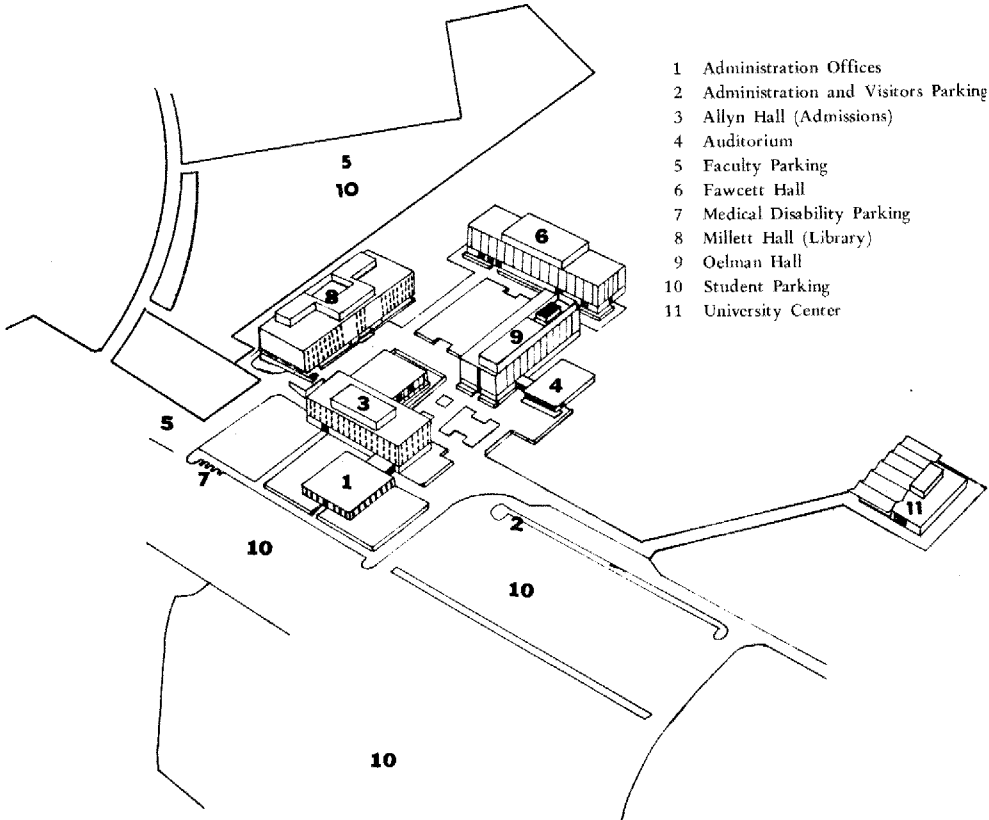
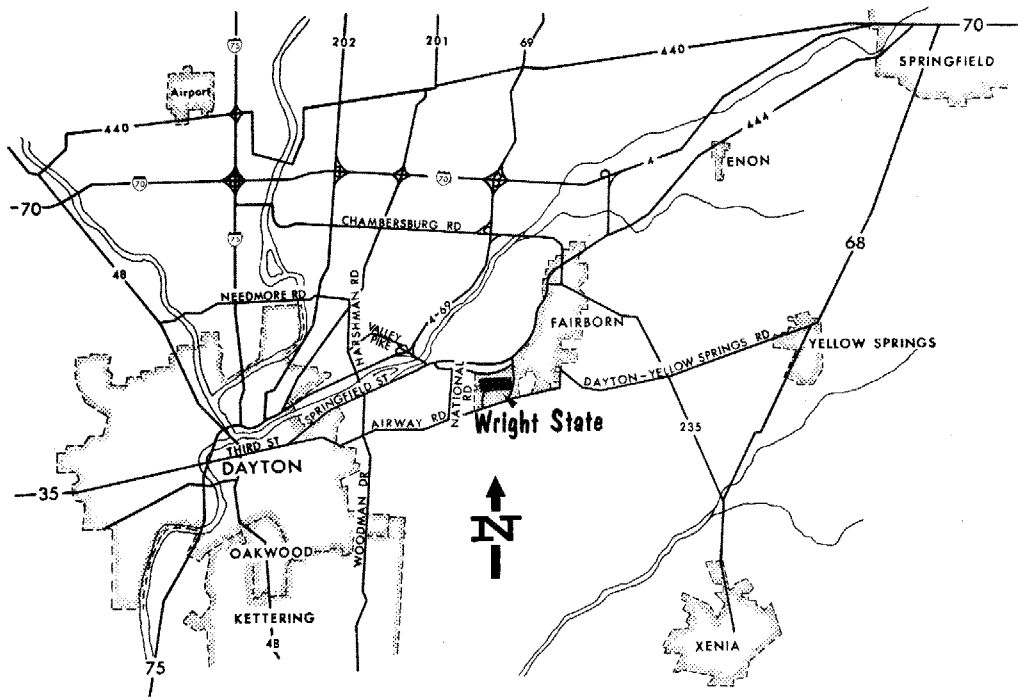
Written Comprehensive Examination

The student will be required to select two fields of emphasis from United States, Latin America, European, Russian, American Diplomatic or European Diplomatic History.

*If History 499 or a comparable course in historical methods has not been completed on the undergraduate level, History 499 must be taken at the beginning of the student's course work.

†In special cases where the Graduate Committee is convinced that statistical techniques would be more useful than a foreign language in the student's research program, Business 311 and 621 may be substituted for the language requirement.

**If History 499 or a comparable course in historical methods has not been completed on the undergraduate level, History 499 must be taken at the beginning of the student's course work.



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